APPENDIX WD

AQUATIC RESOURCE DELINEATION REPORT – GUENOC VALLEY SITE

Aquatic Resources Delineation Report

MAHA RESORT AND GUENOC VALLEY DEVELOPMENT, PHASE 1
LAKE COUNTY, CALIFORNIA

Prepared For:

Lotusland Investment Holdings, Inc.
1 Embarcadero Center, Suite 730
San Francisco, California 94111

Prepared By:

WRA, Inc.
2169-G East Francisco Boulevard
San Rafael, California 94901

Contact: Matt Richmond
richmond@wra-ca.com

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LIST OF PREPARERS

Mike Josselyn, PhD, PWS	Principal
Matt Richmond, BS	Project Manager/Associate Principal Ecologist
Ra'am Akiba-Hajim, BA	Biologist
Gavin Albertoli, BS	Biologist
Russell Andrews, BA	Biologist
Aaron Arthur, MS, CCB	Biologist/Botanist
Scott Batiuk, BS	Biologist/Botanist
Nathaniel Clark, MS	Biologist
Tanner Harris, MS, PWS	Wetland Scientist
Samantha Hill, BS	Biologist
Rhiannon Korhummel, BS	Biologist/Botanist
Michael Rochelle, BS, GISP	GIS Analyst
Erich Schickenberg, BS	Biologist/Botanist
Scott Yarger, BS	Biologist/Botanist

LIST OF ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
CSRL	California Soil Resource Lab
CWA	Clean Water Act
DEM	Digital Elevation Model
EPA	Federal Environmental Protection Agency
FAC	Facultative Plant
FACU	Facultative Upland Plant
FACW	Facultative Wetland Plant
HTL	High Tide Line
MHW	Mean High Water
NAVD88	North American Vertical Datum of 1988
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OBL	Obligate Wetland Plant
OHWM	Ordinary High Water Mark
RHA	Rivers and Harbors Act
UPL	Upland Plant
USGS	U.S. Geological Survey
WRA	WRA, Inc.

1.0 INTRODUCTION

This report describes the methods and results of a delineation of aquatic resources within the approximately 5,350-acre Study Area for Phase 1 of the proposed Maha Resort and Guenoc Valley Development located on the approximately 22,695-acre Guenoc Ranch. The Ranch is located in unincorporated Lake and Napa counties, California, with the Phase 1 Study Area occurring entirely within Lake County (Figure 1, Figure 2). The Ranch contains a mix of undeveloped lands, agricultural lands including cattle pastures and vineyards, and minor areas of infrastructure to support vineyard, winery, and cattle operations.

On multiple dates in 2018 and 2019, WRA conducted a routine delineation within the Study Area to identify wetlands and non-wetland waters (also referred to as "other waters") potentially subject to jurisdiction by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA) and/or Section 10 of the Rivers and Harbors Act (RHA). The following sections describe the regulatory background and methods used to guide the delineation and provide a summary of potentially jurisdictional wetlands and non-wetland waters within the Study Area.

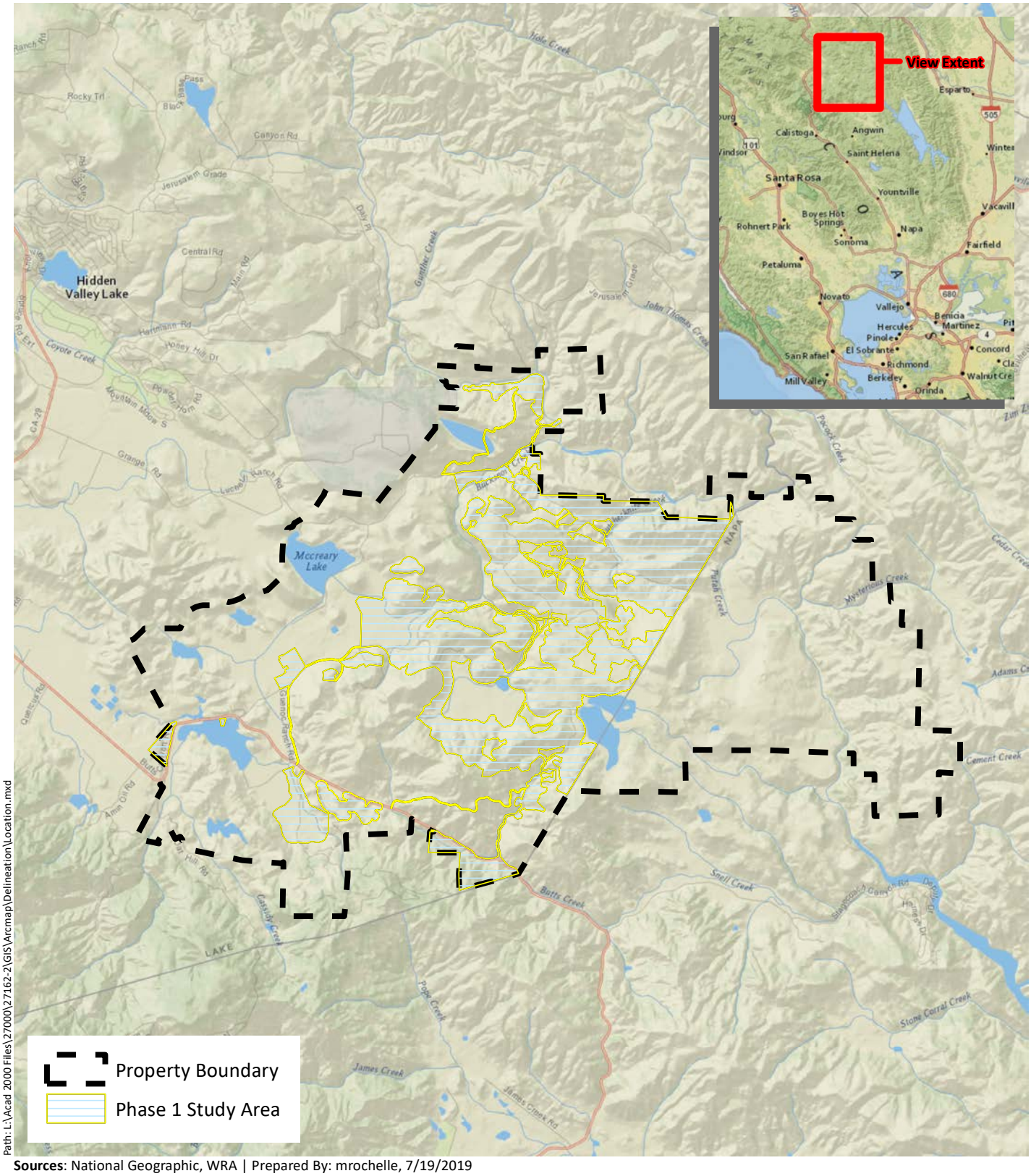
2.0 REGULATORY BACKGROUND

2.1 Section 404 of the Clean Water Act

Section 404 of the Clean Water Act gives the Environmental Protection Agency (EPA) and the Corps regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters of the United States." Section 502(7) of the CWA defines "navigable waters" as "waters of the United States, including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps under the CWA. A summary of the definition of "waters of the United States" in 33 CFR 328.3 (a) includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) territorial seas; (4) impoundments of waters listed here; (5) tributaries to the above waters; (6) waters and wetlands adjacent to the above waters; and (7) prairie potholes, Carolina and Delmarva bays, pocosins, western vernal pools, and Texas coastal prairie wetlands, provided these features have a significant nexus to the above listed waters[1]; (8) all waters located within the 100-year floodplain of waters listed above in items 1-3 or within 4,000 feet of the high tide line (HTL) or ordinary high water mark (OHWM) of a water listed above in items 1-5, provided those waters are determined to have a significant nexus to waters identified in items 1-3 above. For purposes of the determining Corps jurisdiction under the CWA, "navigable waters" as defined in the CWA are the same as "waters of the U.S." defined in 33 CFR 328.3.

Areas not considered to be "waters of the United States" as defined in 33 CFR 328.3 (b), are summarized as follows: (1) waste treatment systems; (2) prior converted cropland; (3) specific classes of ditches, including (i) ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary, (ii) ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands, and (iii) ditches that do not flow, either directly or through another water, into a water identified in 33 CFR 328.3 paragraphs (a) (1) through (3);

[1] Wetlands and non-wetland waters in this category are similarly situated and are combined, for purposes of a significant nexus analysis, in the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of 33 CFR 328.3.



Sources: National Geographic, WRA | Prepared By: mrochelle, 7/19/2019

Figure 1. Phase 1 Study Area Location

Maha Resort and Guenoc Valley
Development, Phase 1
Lake County, California

0 1 2 Miles

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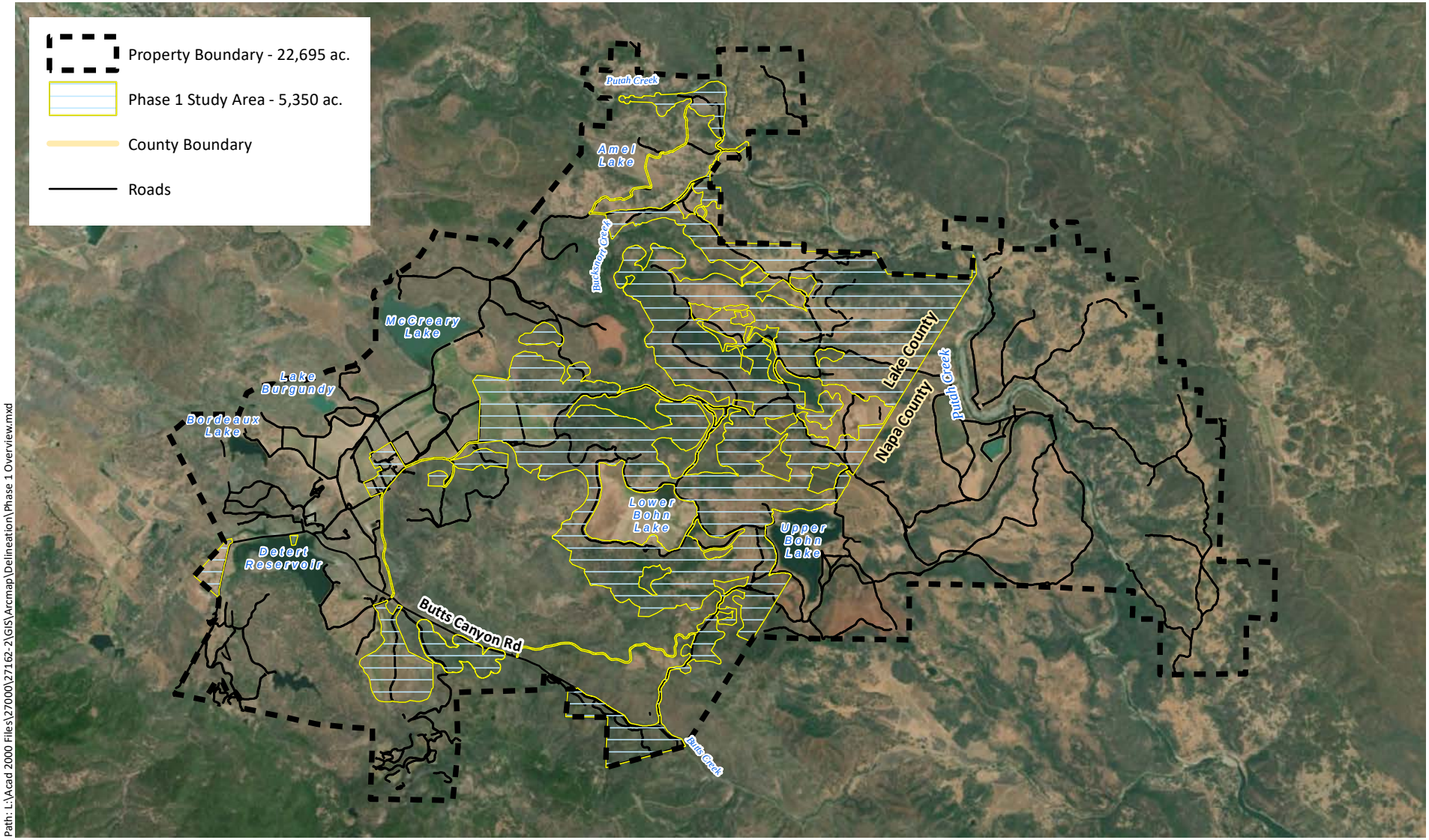

Path: L:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Phase 1 Overview.mxd

Sources: Esri Streaming - NAIP 2016, WRA | Prepared By: mrochelle, 7/19/2019

Figure 2. Phase 1 Study Area Overview

Maha Resort and Guenoc Valley
Development, Phase 1
Lake County, California

0 1 2 Miles

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(4) artificially irrigated areas that would otherwise revert to dry land and manmade aquatic features in otherwise dry land such as stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, cooling ponds, reflecting pools, swimming pools, small ornamental waters, depressions incidental to mining and construction activity, erosional features, and puddles; (5) groundwater; (6) stormwater control features; (7) wastewater recycling structures, groundwater recharge basins, percolation ponds for wastewater recycling, and distribution networks for wastewater recycling.

2.1.1 Wetlands

Wetlands are defined in 33 CFR 328.3 (c) as:

> *…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. Wetlands generally include swamps, marshes, bogs, and similar areas.*

The basis for determining whether a given area is a wetland for the purposes of Section 404 of the CWA is outlined in the Corps *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers* Delineation Manual for the respective region. As defined in 33 CFR 328.4 (c), the extent of federal jurisdiction within wetlands is defined as extending to the limit of the wetland as determined using the methods outlined in the manuals.

2.1.2 Non-Wetland Waters

The limit of federal jurisdiction in tidal non-wetland waters extends to the HTL which is defined in 33 CFR 328.4 (a) as:

> *...the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.*

The limit of federal jurisdiction in non-tidal non-wetland waters extends to the OHWM which is defined in 33 CFR 328.3 (e) as:

> *...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

2.2 Section 10 of the Rivers and Harbors Act

The Corps also has jurisdiction over "navigable waters" under Section 10 of the Rivers and Harbors Act of 1899. Section 10 of this Act applies to tidal areas below mean high water (MHW) and includes tidal areas currently subject to tidal influence, as well as historic tidal areas behind levees that both historically and presently reside at or below MHW. "Navigable waters of the U.S.", as defined in 33 CFR 329.4, are "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce."

The act prohibits any unauthorized action that obstructs navigable capacity. These actions can include building of structures; excavation, fill; and alterations and modifications to navigable waters (33 USC 403). A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity. The upper limit of navigable water is at the point along its length where the character of the river changes from navigable to non-navigable, such as at a major fall or rapids. Since the upper limit of navigability of waterways under Section 10 is sometimes difficult to discern, determinations of navigability under Section 10 are often made by the Corps and kept on file, independent of submitted permit applications or delineations.

3.0 STUDY AREA DESCRIPTION

3.1 Land Use

Guenoc Ranch is an approximately 22,695-acre property located in unincorporated Lake and Napa counties, approximately 6 miles southeast of the town of Middletown (Figure 1). The property contains a mix of undeveloped lands, agricultural lands including cattle pastures and vineyards, and minor areas of infrastructure to support vineyard, winery, and cattle operations. The property is bounded to the north by the U.S. Coast Guard LORAN Reservation, Putah Creek, and the Cedars mountain range; to the east by Putah Creek and Mysterious Valley; to the south by Table Mountain and the Pope Valley; and to the west by Long Valley and Coyote Valley.

The approximately 5,350-acre Phase 1 Study Area that was examined for this report contains a subset of Guenoc Ranch that occurs entirely within Lake County. The location and extent of the Phase 1 Study Area is shown on Figure 2.

3.2 Vegetation

The Study Area is located within the Inner North Coast Ranges geographic subdivision described by the Jepson Flora Project (2019). This area is characterized by widespread serpentine and volcanic soils experiencing relatively low rainfall and hot, dry summers; the resulting vegetation is dominated by a mix of chaparral, foothill pine woodland, and blue oak woodland, with grasslands in valley bottoms and alluvial positions. As is the case with Guenoc Ranch, many of the valley bottoms and alluvial positions throughout the region have been converted for grazing lands, vineyards, or other agricultural uses.

The Study Area is dominated by a mix of blue oak woodland, foothill pine woodland, chamise chaparral, scrub and leather oak chaparral, and non-native annual grasslands, with other communities and specific plant communities present over smaller areas. The large number of ponds, reservoirs, and major streams on the property have also resulted in a large amount of

wetlands and wet meadow features. Many of these features have been historically altered to support ranching and agricultural activities.

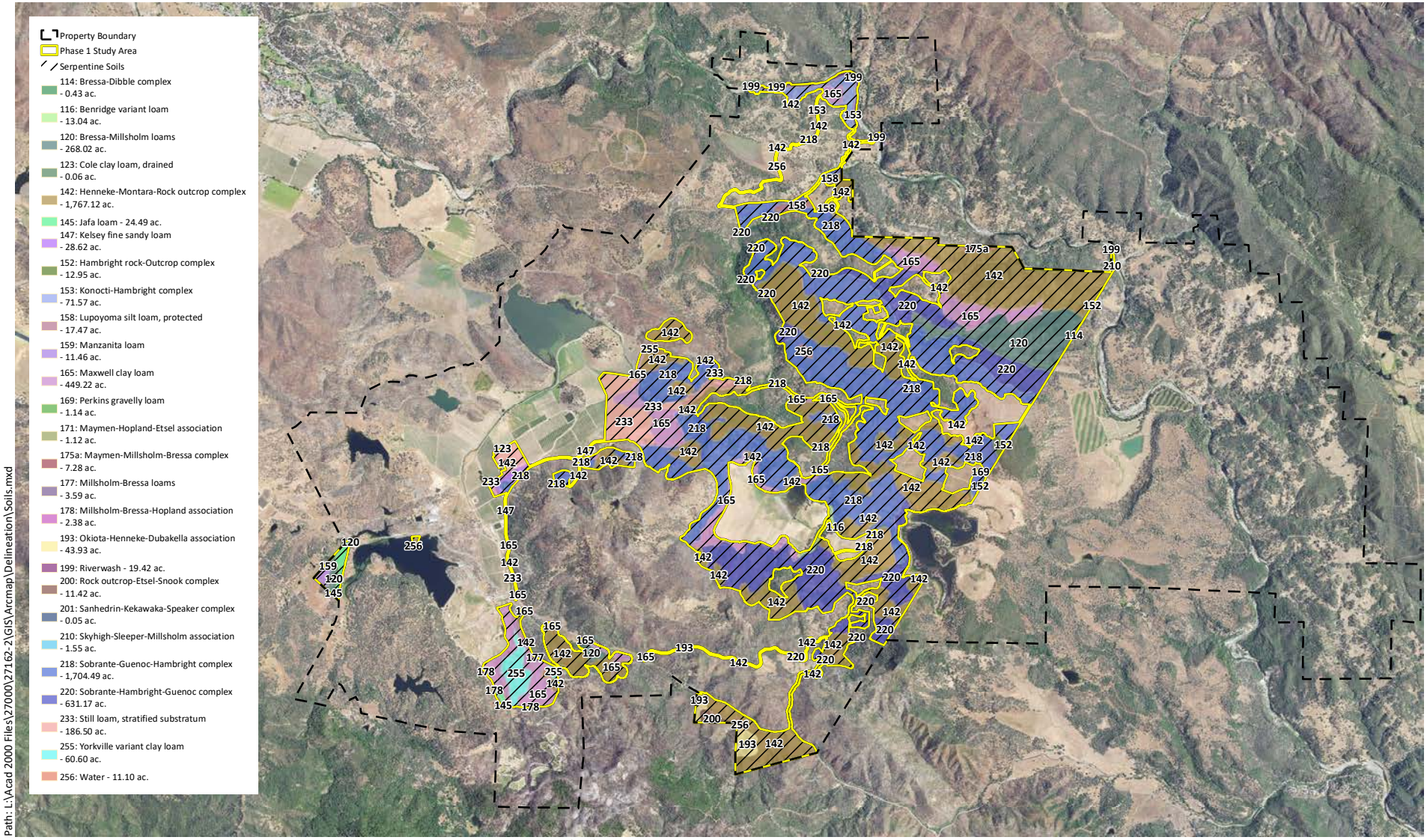
The Study Area contains a large area of serpentine soils dominated by a mix of foothill pine woodland and chaparral communities. These serpentine habitats have a high concentration of native plant species compared to adjacent habitats on non-serpentine soils which are dominated by blue oak woodlands with a high concentration of non-native and invasive species in the understory. Serpentine habitats within the Study Area also contain a high concentration of special-status plant species.

Portions of the Study Area burned during the Valley Fire of 2015. In some areas, the burn was light and the pre-fire vegetation was not completely destroyed. In other areas, the burn was severe and the pre-fire vegetation was killed. In these areas, vegetation that was once dominated by foothill pine woodland or other woodland types has transitioned to shrub-dominated habitats such as scrub or leather oak chaparral. It is anticipated that vegetation in burn-affected areas will transition through a number of stages over the coming years to decades.

3.3 Soils

Guenoc Ranch contains a variety of geologic substrates including ultramafic rocks (primarily serpentinite, with minor inclusions of peridotite, gabbro, and diabase), rocks of the Franciscan complex (primarily sandstone with smaller amounts of shale, chert, limestone, and conglomerate), and volcanic flow rocks of the Clear Lake Volcanic Field (volcanic flow rocks with minor pyroclastic deposits, primarily andesite with minor amounts of dacite and basalt) (USGS 2017).

Soils mapped within Guenoc Ranch are shown on Figure 3. A list of soils and their acreages within the Study Area, as well as their parent material, is provided as Table 1. (CSRL 2018; USDA 1989). The ultramafic, or serpentine, origin of many of the soils found within the Study Area results in a unique physical and chemical composition that hinders the growth of most species that have not evolved on these soil types. As a result, serpentine soils harbor unique native plant assemblages that are resistant to invasion by non-native species and often support numerous special-status plants that are restricted to serpentine soils (Kruckeberg 1984; Alexander et al. 2007).



Sources: Esri Streaming - NAIP 2016, SURGGO Soils, WRA | Prepared By: mrochelle, 7/19/2019

Figure 3. Soils within the Phase 1 Study Area

Maha Resort and Guenoc Valley
Development, Phase 1
Lake County, California

0 1 2 Miles

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Table 1. Soil Units Mapped within the Phase 1 Study Area

Soil Map Unit	Parent Material	Acres
Benridge variant loam, 2 to 15 percent slopes	Basalt	13.04
Bressa-Dibble complex, 30 to 50 percent slopes	Sandstone and shale	0.43
Bressa-Millsholm loams, 8 to 30 percent slopes	Sandstone	268.02
Cole clay loam, dained	Mixed alluvium	0.06
Hambright rock-Outcrop complex, 30 to 75 percent slopes	Basic volcanic rock	12.95
Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes	Serpentine	1,767.12
Jafa loam, 2 to 15 percent slopes	Mixed alluvium	24.49
Kelsey fine sandy loam	Mixed alluvium	28.62
Konocti-Hambright complex, 15 to 30 percent slopes	Basalt	71.57
Lupoyoma silt loam, protected	Mixed alluvium	17.47
Manzanita loam, 2 to 5 percent slopes	Mixed alluvium	11.46
Maxwell clay loam, 0 to 8 percent slopes	Serpentine	449.22
Maymen-Hopland-Etsel association, 15 to 50 percent slopes	Sandstone and shale	1.12
Maymen-Millsholm-Bressa complex, 30 to 50 percent slopes	Sedimentary rock	7.28
Millsholm-Bressa loams, 30 to 50 percent slopes	Sandstone and shale	3.59
Millsholm-Bressa-Hopland association, 30 to 50 percent slopes	Sandstone and shale	2.38
Okiota-Henneke-Dubakella association, 15 to 50 percent slopes	Serpentine	43.93
Perkins gravelly loam, 5 to 9 percent slopes	Igneous rock	1.14
Riverwash	Mixed alluvium	19.42
Rock outcrop-Etsel-Snook complex, 50 to 80 percent slopes	Igneous, metamorphic, and sedimentary rocks	11.42
Sanhedrin-Kekawaka-Speaker complex, 15 to 30 percent slopes	Sandstone	0.05
Skyhigh-Sleeper-Millsholm association, 8 to 15 percent slopes	Sandstone and shale	1.55

Soil Map Unit	Parent Material	Acres
Sobrante-Guenoc-Hambright complex, 2 to 30 percent slopes	Basalt	1,704.49
Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes	Basalt	631.17
Still loam, stratified substratum	Sandstone and shale	186.50
Yorkville variant clay loam, 2 to 8 percent slopes	Serpentine	60.60
Water	n/a	11.10
	Total:	5,350.20

3.4 Hydrology

Guenoc Ranch experiences a Mediterranean climate, with cool, wet winters and hot, dry summers. Average annual rainfall is approximately 43 inches, as measured at the Natural Resources Conservation Service (NRCS) weather station in Middletown, approximately 3.5 miles to the west of the site. The majority of rain falls between November and March. Average annual temperature is 51 degrees Fahrenheit, as measured at the NRCS weather station in Clear Lake, approximately 10 miles to the northwest of the property. The average summer temperature (June through August) is 71 degrees Fahrenheit; the average winter temperature (December through February) is 44 degrees. Nearly all precipitation falls as rain.

Guenoc Ranch is located entirely within the Putah Creek watershed which drains into Lake Berryessa, located approximately 8 miles to the southeast of the property. The property contains significant hydrologic resources, with a large network of ponds and reservoirs connected by perennial to intermittent streams and agricultural ditches and channels. Putah Creek, a perennial stream, runs along the northern and eastern portions of the property, and many of the drainages within the property drain into Putah Creek. Other major creeks within the property include Bucksnort Creek, Butcherknife Creek, Hunting Creek, Butts Creek, and Cassidy Creek. Major ponds and reservoirs within the Property include Detert Reservoir, McCreary Lake, Lake Burgundy, Lake Bordeaux, Upper Bohn Lake, Lower Bohn Lake, and Amel Lake.

4.0 METHODS

WRA biologists performed a delineation of aquatic resources within the Phase 1 Study Area on multiple dates between 2018 and 2019. Prior to conducting the evaluation, WRA reviewed a range of background materials including the *Soil Survey of Lake County* (USDA 1989), the California Soil Resource Lab's (CSRL) online soil viewer (CSRL 2019), the National Wetland Inventory (NWI; USFWS 2019), and the U.S. Geological Survey (USGS) Jericho Valley, Detert Reservoir, and Aetna Springs 7.5-minute quadrangle maps. WRA also reviewed historic aerial imagery from Google Earth (2019).

During the on-site evaluation, WRA followed the methods outlined in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement; Corps 2008), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* ("OHWM Guide"; Lichvar and McColley 2008). The jurisdictional wetlands were identified and their boundaries mapped using the Routine Method described in the Corps Manual. The jurisdictional limits of non-wetland waters under Section 404 of the CWA were mapped based on a combination of field indicators described in the OHWM Guide and Regulatory Guidance Letter 05-05 (Corps 2005).

4.1 Section 404 of the Clean Water Act

4.1.1 Wetlands

Routine Method

WRA followed the Routine Method to evaluate the Study Area for the presence or absence of indicators of the three wetland parameters described in the Corps Manual (Environmental Laboratory 1987) and Arid West Supplement (Corps 2008). Data on vegetation, hydrology, and soils were collected at sample points within potential wetland communities and adjacent upland areas. Sample points that contained positive indicators for hydrophytic vegetation, hydric soils, and wetland hydrology were considered to be wetland. Except in cases of atypical or problematic wetland situations (i.e., difficult wetland situations, as described below), sample points that lacked one or more indicators were considered to be upland. Sample point data were reported on Arid West Supplement data forms. Sample point locations were recorded using a handheld GPS unit with sub-meter accuracy.

Wetland boundaries were identified using a combination of indicators observed on the ground, most often minor shifts in topography and changes in dominant vegetation, in addition to other indicators. Where wetland boundaries were broad and difficult to determine in the field, wetland signatures visible in recent and historical aerial imagery from Google Earth and high resolution aerial imagery from April to August 2016 acquired from Hexagon were used to determine boundaries. Based on a WETS hydrological analysis (see summary below and full analysis in Appendix A), WRA determined that the photos represent periods with normal precipitation levels. Using imagery from normal periods allowed WRA to identify the normal extent of wetland conditions across the site.

WRA also utilized high resolution topographic data derived from the USGS Lake County Lidar date set (USGS 2017). The Lidar data was processed into a Digital Elevation Model (DEM) raster with a horizontal resolution of 1 ft. x 1 ft. using ArcGIS software. The high resolution aerial imagery and elevation data were utilized during heads-up digitizing to refine wetland and stream boundaries.

Difficult Wetland Situations

The Arid West Supplement (Corps 2008) includes recommended procedures for completing wetland delineations in areas of “difficult wetland situations” in which wetlands may lack one or more indicators due to natural or anthropogenic factors. Although the Corps Manual and Arid West Supplement were utilized in the wetland determination, they do not provide exhaustive lists of the difficult situations and problem areas that can arise during delineations in the Arid West. In these situations, the Corps Manual and Regional Supplements stress the importance of using best professional judgment and knowledge of the ecology of the wetlands in the region during the collection and interpretation of data in difficult sites.

Difficult wetland situations within the Phase 1 Study Area included (1) the presence of reed fescue (*Festuca arundinacea*, FACU) displaying morphological adaptations to wetlands (i.e., hummocky growth to elevate the plants above the saturated zone) and (2) the presence of dark (N 2.5/0) serpentine soils that may mask redox features. When reed fescue was observed displaying morphological adaptations to saturated soils, it was reclassified from FACU to FAC and the dominance test was recalculated following the morphological adaptations guidance from the Arid West Manual. When dark soils were encountered with no apparent redoximorphic features, they were assumed to be upland soils when hydrophytic vegetation and wetland hydrology were absent and were assumed to be hydric soils when hydrophytic vegetation and wetland hydrology were present.

WETS Analysis

A hydrologic analysis (i.e., WETS analysis; USDA 1997; Sprecher and Warne 2000) was conducted to determine whether precipitation levels during the three months prior to each aerial image used by WRA and prior to each site visit were above, below, or within the 30-year average for the region. Long-term precipitation data (i.e., the WETS table) were obtained from weather stations in nearby Middletown, located approximately 6 miles west of the Study Area, and Clear Lake, located approximately 10 miles northwest of the Study Area, part of the National Weather Service Cooperative Network. Daily precipitation data for the three months preceding the date of each aerial image used by WRA, as well as for the date of each site visit by WRA, were obtained from the Middletown 0.1P weather station located approximately 6 miles west of the Study Area. A summary of the results of the WETS analysis is provided below in Table 2; the full analyses are provided as Appendix A.

Table 2. Summary of WETS Precipitation Analysis

Date	Description	Relative Precipitation Levels
May 2016	Date of commercial aerial imagery	Normal rainfall
June 2016	Date of commercial aerial imagery	Normal rainfall
July 2016	Date of commercial aerial imagery	Normal rainfall
August 2016	Date of commercial aerial imagery	Normal rainfall
May 1-4, 2018	Delineation site visit	Normal rainfall
May 30-June 1, 2018	Delineation site visit	Above normal rainfall
August 21-22, 2018	Delineation site visit	Normal rainfall
September 6-7, 2018	Delineation site visit	Normal rainfall
April 24-26, 2019	Delineation site visit	Above normal rainfall
May 2-3, 2019	Delineation site visit	Above normal rainfall
May 7-9, 2019	Delineation site visit	Above normal rainfall
June 17, 2019	Delineation site visit	Above normal rainfall
June 20, 2019	Delineation site visit	Above normal rainfall

4.1.2 Non-Wetland Waters

This study also evaluated the presence of non-wetland waters potentially subject to Corps jurisdiction under Section 404 of the CWA. Non-wetland waters subject to Corps jurisdiction include lakes, rivers, and streams (including intermittent and ephemeral streams).

The OHWM was used to identify the extent of Corps jurisdiction over non-wetland waters under Section 404 of the CWA. The location of the OHWM was determined based on a combination of indicators observed on the ground (e.g., water stains or scour marks). The width between the OHWM on either side of each feature was visually estimated in the field and, when possible, the segments of the centerline or edges were mapped using handheld GPS units with sub-meter accuracy.

4.2 Section 10 of the Rivers and Harbors Act

To determine the presence of non-wetland waters potentially subject to Corps jurisdiction under Section 10 of the RHA, WRA reviewed the online mapping tool hosted on the Corps Sacramento District's website[2]. Based on the mapper, no non-wetland waters within the Study Area are subject to Corps jurisdiction under Section 10 of the Rivers and Harbors Act.

5.0 RESULTS

As described in Section 3.0, the property contains significant hydrologic resources, with a large network of ponds and reservoirs connected by perennial to intermittent streams and agricultural ditches and channels. The entirety of the Study Area is located within the watershed of Putah Creek, which ultimately drains into the Sacramento River, a traditional navigable water of the United States.

Descriptions of the aquatic resources identified within the Study Area that are potentially subject to federal jurisdiction under Section 404 of the CWA are provided in the following sections. A summary of aquatic resource acreages is provided in Table 3. WETS analyses for aerial imagery and fieldwork dates are included as Appendix A. Maps showing the location and extent of aquatic resources mapped within the Study Area are provided as Appendix B. Wetland Determination Data Forms are provided as Appendix C. Photographs of the Study Area are provided as Appendix D. A list of all plant species observed during the delineation site visits is included as Appendix E.

[2] http://www.spk.usace.army.mil/Missions/Regulatory/Jurisdiction/Navigable-Waters-of-the-US/

Table 3. Summary of Potentially Jurisdictional Features Mapped within the Study Area

Habitat Type	Classification*	Acres	Linear Feet
Wetlands			
Forested Wetlands	PFO1E	0.61	-
Scrub-Shrub Wetlands	PSS1C	1.15	-
Seasonal Wetland Depressions	PEM2C	2.53	-
Seasonal Wetland Ditches	PEM2Cx	0.50	-
Seasonal Wetland Pond Fringes	PEM1/2C	3.52	-
Seasonal Wetland Seeps/Swales	PEM2C	42.40	-
Seasonal Wetland Wet Meadows	PEM2C	45.46	-
Stream Fringe/In-Stream Wetlands	R4SB7	26.15	-
	Total Wetlands:	**122.74**	**-**
Non-Wetland Waters			
Ephemeral Ditch	R4SBA/Cx	0.25	6,419
Ephemeral Stream	R4SBA	20.73	301,130
Intermittent Stream	R4SBC	13.68	61,795
Perennial Stream	R5UBF/H	23.63	26,039
Open Waters	PUBK	10.70	-
	Total Non-Wetland Waters:	**68.99**	**395,383**
	Grand Total Wetlands and Non-Wetland Waters:	**191.31**	**395,383**

*See Federal Geographic Data Committee 2013

5.1 Section 404 of the Clean Water Act

5.1.1 Wetlands

Forested Wetlands

Within the Study Area, forested wetlands occur along a low-gradient portion of Butcherknife Creek, where a stand of trees was present. In the overstory, vegetation was dominated by white alder (*Alnus rhombifolia*; FACW). In the understory, vegetation was dominated by torrent sedge (*Carex nudata*; FACW), tule (*Schoenoplectus acutus* ssp. *occidentalis*; OBL), reed fescue (*Festuca arundinacea*; FACU), and dallis grass (*Paspalum dilatatum*; FAC). Hydric soils were assumed based on the presence of perennial surface water and the fact that hydrophytic vegetation and several indicators of wetland hydrology were met. Primary indicators of wetland

hydrology included Surface Water (A1), High Water Table (A2) (assumed based on perennial surface water), and Saturation (A3); secondary indicators included Water Marks (Riverine) (B1), Drift Deposits (Riverine) (B2), and FAC-Neutral Test (D5). Wetland boundaries were determined based primarily on the edge of tree canopy.

Forested wetlands were classified as PFO1E: Palustrine (P), forested (FO), broad-leaved deciduous (1), and seasonally flooded/saturated (E).

Scrub-Shrub Wetlands

Within the Study Area, scrub-shrub wetlands occurred along low-gradient portions of Butts Creek, where shrub stands were present. In the shrub layer, the vegetation was dominated by Brewer's willow (*Salix breweri*; FAC), with other species such as coffeeberry (*Frangula californica*; NL), spice bush (*Calycanthus occidentalis*; FAC), and western azalea (*Rhododendron occidentale*; FAC) as co-dominants. In the herbaceous layer, the vegetation was typically sparse and included species such as cobwebby hedge nettle (*Stachys albens*; OBL) and seep monkeyflower (*Mimulus guttatus*; OBL). Hydric soils were assumed based on the extended presence of surface water and the fact that hydrophytic vegetation and several indicators of wetland hydrology were met. Primary indicators of wetland hydrology included Surface Water (A1), High Water Table (A2) (assumed based on perennial surface water), and Saturation (A3); secondary indicators included Water Marks (Riverine) (B1), Drift Deposits (Riverine) (B2), and FAC-Neutral Test (D5). Wetland boundaries were determined primarily based on the edge of the shrub canopy.

Scrub-shrub wetlands were classified as PSS1CE: Palustrine (P), scrub-shrub (SS), broad-leaved deciduous (1), and seasonally flooded (C) or seasonally flooded/saturated (E).

Seasonal Wetland Depressions

Features in the seasonal wetland depressions category are closed depressions that are seasonally inundated by surface runoff and groundwater and are situated outside of other aquatic features. Seasonal wetland depressions are numerous within the former golf course within the western portion of the Study Area but are otherwise infrequent and scattered within the Study Area. Vegetation was dominated by spike rush (*Eleocharis macrostachya*; OBL), hairy cats ear (*Hypochaeris radicata*; FACU), annual beard grass (*Polypogon monspeliensis*; FACW), meadow barley (*Hordeum brachyantherum*; FACW), valley sedge (*Carex barbarae*; FAC), and broadleaf cattail (*Typha latifolia*; OBL). Soils were generally loam with matrix colors of dark brown (7.5YR 3/3) or dark reddish brown (5YR 3/3), or clay with colors of very dark gray (2.5Y 3/1), very dark greenish gray (10Y 3/1), and black (10YR 2/1, 2.5Y 2.5/1), and redoximorphic features consisting of black (7.5YR 2/1) manganese concentrations and yellowish red (5YR 4/6) and olive (5Y 4/4) iron concentrations at 2 to 5 percent cover as masses in the matrix. Soils met the Redox Dark Surface (F6) hydric soil indicator, and in several situations, the problematic hydric soil indicator. At SP-116, the dark reddish brown matrix may have been masking redoximorphic concentrations, hydrophytic vegetation and wetland hydrology indicators were met, and the feature was a shallow, seasonally ponded depression. At SP-124 and SP-126, the dark serpentine soils may have masked redoximorphic features, hydrophytic vegetation and wetland hydrology indicators were met, and the feature was a shallow, seasonally ponded depression. Indicators of wetland hydrology consisted of primary indicators including High Water Table (A2), Saturation (A3), Inundation Visible on Aerial Imagery (B7), and Biotic Crust (B12), Redox Dark Surface (F7); secondary indicators of wetland hydrology included Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5). Wetland boundaries were determined based on a shift in vegetation and topography.

Seasonal wetland depressions were classified as PEM2C: Palustrine (P), emergent (EM), non-persistent (2), and seasonally flooded (C).

Seasonal Wetland Ditches

Features in the seasonal wetland ditch category are man-made, linear ditch features that are adjacent and parallel to roads and are designed to convey surface water. These features are seasonally inundated and/or saturated for a duration sufficient to support wetland conditions. Seasonal wetland ditches are infrequent and scattered within the Study Area. Vegetation was dominated by Italian rye grass, reed fescue, and annual beard grass. Hydric soils were assumed based on the summer presence of surface water and saturated soils and the fact that hydrophytic vegetation indicators were met. Indicators of wetland hydrology included Surface Water (A1), Saturation (A3), and High Water Table (A2). Wetland boundaries were determined based on a shift in vegetation and topography.

Seasonal wetland ditches were classified as PEM2Cx: Palustrine (P), emergent (EM), non-persistent (2), seasonally flooded (C), and excavated (x).

Seasonal Wetland Pond Fringes

Features in the seasonal wetland pond fringes category are located adjacent to and directly connected to bodies of open water such as ponds and reservoirs. These features are typically inundated when the bodies of open water at are their seasonal maximum extent and dry down as the open water feature dries down. Seasonal wetland pond fringes are infrequent and scattered throughout the Study Area. Vegetation was dominated by spikerush, annual beard grass, variegated clover (*Trifolium variegatum*; FAC), Mediterranean barley (*Hordeum marinum*; FAC), Jepson's button celery (*Eryngium aristulatum* var. *aristulatum*; OBL), soft chess (*Bromus hordeaceus*; FACU), and broadleaf cattail. Soils were generally loamy clay or cobbly loam with matrix colors of olive gray (5Y 4/2) or dark brown (7.5YR 3/2) and redoximorphic features consisting of olive (5Y 5/6) dark reddish brown (5YR 3/4) iron concentrations and black (N2.5/-) manganese concentrations occurring as masses within the matrix or along pore linings at 2 to 4 percent. Soils most often met the Depleted Matrix (F3) and Redox Dark Surface (F6) hydric soil indicators. Primary indicators of wetland hydrology included Inundation Visible on Aerial Imagery (B7), Water-Stained Leaves (B9) Biotic Crust (B12), and Oxidized Rhizospheres Along Living Roots (C3); secondary indicators included Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5). Wetland boundaries were determined based on a shift in vegetation and topography.

Seasonal wetland pond fringes were classified as PEM1/2C: Palustrine (P), emergent (EM), persistent (1) to non-persistent (2), and seasonally flooded (C).

Seasonal Wetland Seeps/Swales

Features in the seasonal wetland seeps/swales category are typically shallow, linear, open depressions that convey flows but lack OHWM indicators and remain inundated and/or saturated for a duration sufficient to support wetland conditions. This category also includes seeps situated on slopes that support wetland conditions but are not linear depressions. Seasonal wetland seeps/swales may occur singularly or as part of a network of aquatic features such as ephemeral drainages or other swales and can occur as part of a network. These features are abundant throughout the Study Area, regardless of slope, aspect, or vegetation type. Vegetation was

dominated by species such as Mexican rush, iris-leaved rush (*Juncus xiphioides*; OBL), reed fescue, Mediterranean barley, bird's-foot trefoil (*Lotus corniculatus*; FAC), Bermuda grass (*Cynodon dactylon*; FACU), bifid sedge (*Carex serratodens*; FACW), marsh zigadenus (*Toxicoscordion fontanum*; OBL), and Italian ryegrass. Soils were generally loams, loamy clays, or clays with matrix colors of very dark gray (2.5Y 3/1), dark olive gray (5Y 3/2), black (5Y 2.5/1, 10YR 2/1, 2.5Y 2.5/1), and very dark grayish brown (10YR 3/2) and redoximorphic features consisting of brown (7.5YR 4/4), strong brown (7.5YR 4/6), dark yellowish brown (10YR 3/4, 10YR 3/6) iron concentrations occurring in the matrix and along pore linings as soft masses at 5 to 30 percent. Soils most often met the Redox Dark Surface (F6) hydric soil indicator. In some cases, the problematic hydric soil indicator was met because the dark serpentine soils may have masked redoximorphic features, hydrophytic vegetation and wetland hydrology indicators were met, and the feature was in an area that seasonally ponded. Primary indicators of wetland hydrology included Surface Water (A1), Saturation (A3), Biotic Crust (B12), and Oxidized Rhizospheres Along Living Roots (C3); secondary indicators included Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5). Wetland boundaries were most commonly determined based on a shift in vegetation and topography.

Seasonal wetland seeps/swales were classified as PEM2C: Palustrine (P), emergent (EM), non-persistent (2), and seasonally flooded (C).

Seasonal Wetland Wet Meadows

Features mapped as seasonal wetland wet meadows are broad, flat to gently sloping, non-depressional areas characterized by herbaceous vegetation that support wetland conditions. These features often occur in valley bottoms or in flats at the bases of slopes and may intergrade with or have direct connection with other aquatic features. They vary in size from less than 0.5 acre to as much as approximately 11 acres. Within the Study Area, seasonal wetland wet meadows are infrequent and scattered. Vegetation was dominated by spikerush, wild licorice (*Glycyrrhiza lepidota*; FAC), Italian ryegrass (*Festuca perennis*; FAC), Mediterranean barley, curly dock (*Rumex crispus*; FAC, cobwebby hedge nettle, Mexican rush (*Juncus mexicanus*; FACW), and reed fescue. Soils were clay or clay loam with matrix colors of black (5Y 2.5/1, 10YR 2/1), dark grayish brown (10YR 4/2), very dark gray (7.5YR 3/1) with redoximorphic features consisting of dark reddish brown (5YR 3/4), strong brown (7.5YR 4/6), and dark brown (7.5YR 3/3) iron concentrations occurring as soft masses in the matrix and along pore linings at 5 to 20 percent. Soils most often met the Redox Dark Surface (F6) and Depleted Matrix (F3) hydric soil indicator. In some cases, the problematic hydric soil indicator was met because the dark serpentine soils may have masked redoximorphic features, hydrophytic vegetation and wetland hydrology indicators were met, and the feature was in an area that seasonally ponded. Primary indicators of wetland hydrology include Surface Water (A1), Oxidized Rhizospheres Along Living Roots (C3); secondary indicators include Drainage Patterns (B10), FAC-Neutral Test (D5), Saturation Visible on Aerial Imagery (C9). Wetland boundaries were most often determined based on topography and a shift in vegetation.

Seasonal wetland wet meadows were classified as PEM2C: Palustrine (P), emergent (EM), non-persistent (2), and seasonally flooded (C).

Stream Fringe/In-Stream Wetlands

Features mapped in the stream fringe/in-stream wetlands category are typically flat to gently sloping areas situated adjacent to intermittent and perennial streams and characterized by perennial herbaceous vegetation. This category also includes low-gradient channels that have

the appearance of streams but lack indicators of OHWM and are fully vegetated with perennial graminoids. Stream fringe/in-stream wetlands are fairly abundant throughout the Study Area. Vegetation was dominated by spike rush, Mexican rush, iris-leaved rush, annual beard grass, Italian rye grass, bird's-foot trefoil, Bermuda grass. Soils were most often loam, clay loams, or clay with matrix colors of very dark grayish brown (10YR 3/2), dark brown (7.5YR 3/2), black (10YR 2/1), dark gray (5Y 4/1, 10YR 4/1), and very dark gray (10YR 3/1) with redoximorphic features consisting of dark gray (10YR 4/1) depletions and dark olive brown (2.5Y 3/3) and dark brown (7.5YR 3/4) and strong brown (7.5YR 4/6) iron concentrations and occurring as soft masses in the matrix and pore linings at 2 to 40 percent. Soils most often met the Depleted Matrix (F3), Depleted Dark Surface (F7), and Redox Dark Surface (F6) hydric soil indicators. Primary indicators of wetland hydrology included Surface Water (A1), Biotic Crust (B12) and Oxidized Rhizospheres Along Living Roots (C3); secondary indicators included Saturation Visible on Aerial Imagery (C9), Sediment Deposits (Riverine) (B2), and FAC-Netral Test (D5). Wetland boundaries were determined based on topography and a shift in vegetation.

Stream fringe/in-stream wetlands were classified as R4SB7: Riverine (R), intermittent (4), streambed (SB), and vegetated (7).

5.1.2 Non-Wetland Waters

For the purposes of this report, stream features were classified as ephemeral, intermittent, or perennial based on the County Code, which defines streams based on their symbology on USGS maps, with solid blue line streams considered perennial, dashed blue line streams considered intermittent, and all other streams considered ephemeral.

Ephemeral Ditch

Features in the ephemeral ditch category are man-made, linear ditch features that are adjacent and parallel to roads and are designed to convey surface water and have indicators of OHWM. These features may convey flows during and immediately after precipitation events but remain dry otherwise. Ephemeral ditches are infrequent and scattered within the Study Area.

Ephemeral ditches were classified as R4SBA/Cx: Riverine (R), intermittent (4), streambed (SB), temporarily flooded (A) to seasonally flooded (C), and excavated (x).

Ephemeral Stream

Features in the ephemeral stream category are naturally formed, linear features that have indicators of OHWM and may convey flows only during or immediately after a precipitation event but remain dry otherwise. Ephemeral streams are the most abundant feature within the Study Area, numbering in the hundreds. They occur on all slopes and aspects and within forested, shrub-dominated, and herbaceous plant communities. Though they most commonly occur on medium- to high-gradient slopes, they also sometimes occur in low-gradient topography.

Ephemeral streams were classified as R4SBA: Riverine (R), intermittent (4), streambed (SB), and temporarily flooded (A).

Intermittent Stream

Features in the intermittent stream category are linear features that have indicators of OHWM and within which water flows for a portion of the year, generally drying out during the driest time of the year. These features are fairly abundant within the Study Area.

Intermittent streams were classified as R4SBC: Riverine (R), intermittent (4), streambed (SB), and seasonally ponded (C).

Perennial Stream

Features in the perennial stream category are linear features that have indicators of OHWM and within which water flows the entire year, even during the dry season. Perennial streams are relatively uncommon within the Study Area but include larger, named streams such as Putah Creek.

Perennial streams were classified as R5UBF & R5UBF/H: Riverine (R), unknown perennial (5), unconsolidated bottom (UB), and semipermanently flooded (F) or semipermanently flooded to permanently flooded (H).

Open Waters

Features in the open waters category correspond to ponds and reservoirs that are typically man-made and range from smaller depressions that pond water only during a portion of the growing to larger features that hold water year round. Open waters features are relatively infrequent and scattered within the Study Area.

Open waters were classified as PUBK: Palustrine (P), unconsolidated bottom (UB), and artificially flooded (K).

5.2 Section 10 of the Rivers and Harbors Act

Based on a review of the Sacramento Corps District's Section 10 online mapping tool, WRA determined that none of the non-wetland waters within the Study Area are subject to Section 10 of the Rivers and Harbors Act.

6.0 CONCLUSION

The results of this delineation of aquatic resources was based on conditions observed during the time of the assessment and information provided to WRA by the property owner and project proponent. It should be noted that the Corps makes all final decisions regarding regulatory jurisdiction, and WRA recommends securing a Jurisdictional Determination from the Corps before embarking on any project activities that could result in the loss of Waters of the United States.

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APPENDIX A

WETS ANALYSES

WETS historic data from climate station: Middletown 4SE
2016 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth May 2016

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.63	2.03	2.42	2.19	Normal	2	3	6
2nd month prior	March	1.77	5.21	6.25	18.47	Wet	3	2	6
3rd month prior	Februrary	3.25	6.34	7.6	3.02	Dry	1	1	1
								SUM=	**13**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2016 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth June 2016

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	May	0.33	1.48	1.46	0.12	Dry	1	3	3
2nd month prior	April	0.63	2.03	2.42	2.19	Normal	2	2	4
3rd month prior	March	1.77	5.21	6.25	18.47	Wet	3	1	3
								SUM=	**10**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2016 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth July 2016

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	June	0	0.2	0.17	0.12	Normal	2	3	6
2nd month prior	May	0.33	1.48	1.46	0.12	Dry	1	2	2
3rd month prior	April	0.63	2.03	2.42	2.19	Normal	2	1	2
								SUM=	**10**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2016 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth August 2016

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	July	0	0	0	0	Normal	2	3	6
2nd month prior	June	0	0.2	0.17	0.12	Normal	2	2	4
3rd month prior	May	0.33	1.48	1.46	0.12	Dry	1	1	1
								SUM=	**11**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2017 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth April 2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	March	1.8	5.47	6.53	4.33	dry	2	3	6
2nd month prior	Februrary	3.02	6.12	7.32	21.65	wet	3	2	6
3rd month prior	January	2.79	8.42	10.07	6.09	dry	2	1	2
								SUM=	**14**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2017 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth May 2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.7	2.07	2.49	6.58	Wet	3	3	9
2nd month prior	March	1.8	5.47	6.53	4.33	Normal	2	2	4
3rd month prior	Februrary	3.02	6.12	7.32	21.65	Wet	3	1	3
								SUM=	**16**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2017 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth June 2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	May	0.33	1.45	1.45	0.3	Dry	1	3	3
2nd month prior	April	0.7	2.07	2.49	6.58	Wet	3	2	6
3rd month prior	March	1.8	5.47	6.53	4.33	Normal	2	1	2
								SUM=	**11**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2017 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth July 2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	June	0	0.2	0.17	0.33	Wet	3	3	9
2nd month prior	May	0.33	1.45	1.45	0.3	Dry	1	2	2
3rd month prior	April	0.7	2.07	2.49	6.58	Wet	3	1	3
								SUM=	**14**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2017 observed rainfall data from climate station: Middletown-01.P
Date of site visit: Google Earth August 2017

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	July	0	0	0	0	Normal	2	3	6
2nd month prior	June	0	0.2	0.17	0.33	Wet	3	2	6
3rd month prior	May	0.33	1.45	1.45	0.3	Wet	3	1	3
								SUM=	**15**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2018 observed rainfall data from climate station: Middletown-01.P
Date of site visit: May 1-4, 2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	March	1.75	5.25	6.29	10.91	Wet	3	3	9
2nd month prior	Februrary	3.2	6.72	8.02	1.64	Dry	1	2	2
3rd month prior	January	2.87	9.15	10.89	10.26	Normal	2	1	2
								SUM=	**13**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Middletown 4SE
2018 observed rainfall data from climate station: Middletown-01.P
Date of site visit: May 17-18, 2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.77	2.37	2.83	4.16	Wet	3	3	9
2nd month prior	March	1.75	5.25	6.29	10.91	Wet	3	2	6
3rd month prior	Februrary	3.2	6.72	8.02	1.64	Dry	1	1	1
								SUM=	**16**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Mid Middletown 4SE, CA
2018 observed rainfall data from climate station: Middletow 1987-2017
Date of site visit: May 30-June 1, 2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.77	2.37	2.83	4.16	Wet	3	3	9
2nd month prior	March	1.75	5.25	6.29	11.01	Wet	3	2	6
3rd month prior	Feburary	3.2	6.72	8.02	1.13	Dry	1	1	1
								SUM=	**16**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Clearlake 4 SE, CA
2018 observed rainfall data from climate station: Middletown-01.P
Date of site visit: August 21, 22, and 28, 2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	July	0	0.04	0	0	Normal	2	3	6
2nd month prior	June	0	0.18	0.16	0.01	Normal	2	2	4
3rd month prior	May	0.24	0.87	0.87	0.11	Dry	1	1	1
								SUM=	**11**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: Clearlake 4 SE, CA
2018 observed rainfall data from climate station: Middletown-01.P
Date of site visit: September 6-7, 2018

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	August	0	0.08	0	0	Normal	2	3	6
2nd month prior	July	0	0.04	0	0	Normal	2	2	4
3rd month prior	June	0	0.18	0.16	0.01	Normal	2	1	2
								SUM=	**12**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: **Middletown, CA 1988-2018 (NCDC COOP #045598)**
2019 observed rainfall data from climate station: **Middletown 4SE, CA**
Date of site visit: **4/24/2019**

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	March	1.66	5.11	6.1	10.41	Wet	3	3	9
2nd month prior	February	2.88	6.47	7.69	24.4	Wet	3	2	6
3rd month prior	January	2.96	9.34	11.12	13.74	Wet	3	1	3
								SUM=	**18**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: **Middletown, CA 1988-2018 (NCDC COOP #045598)**
2019 observed rainfall data from climate station: **Middletown 4SE, CA**
Date of site visit: **5/2/2019**

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.87	2.47	2.97	1.32	Normal	2	3	6
2nd month prior	March	1.66	5.11	6.1	10.41	Wet	3	2	6
3rd month prior	February	2.88	6.47	7.69	24.4	Wet	3	1	3
								SUM=	**15**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: **Middletown, CA 1988-2018 (NCDC COOP #045598)**
2019 observed rainfall data from climate station: **Middletown 4SE, CA**
Date of site visit: **5/7-8/2019**

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	April	0.87	2.47	2.97	1.32	Normal	2	3	6
2nd month prior	March	1.66	5.11	6.1	10.41	Wet	3	2	6
3rd month prior	February	2.88	6.47	7.69	24.4	Wet	3	1	3
								SUM=	**15**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

Condition Values: Dry=1
Normal=2
Wet=3

WETS historic data from climate station: **Middletown, CA 1988-2018 (NCDC COOP #045598)**
2019 observed rainfall data from climate station: **Middletown 4SE, CA**
Date of site visit: **6/17-20/2019**

		Rainfall Data from WETS							
	Month	3 yrs in 10 less than	Average	3 yrs in 10 more than	Observed rainfall (inches)	Condition (dry, wet, normal)	Condition Value	Weighting factor	product of previous two columns
1st month prior	May	0.29	1.45	1.34	5.38	Wet	3	3	9
2nd month prior	April	0.87	2.47	2.97	1.32	Normal	2	2	4
3rd month prior	March	1.66	5.11	6.1	10.41	Wet	3	1	3
								SUM=	**16**

Note: If sum is:

6-9	prior period has been drier than normal
10-14	prior period has been normal
15-18	prior period has been wetter than normal

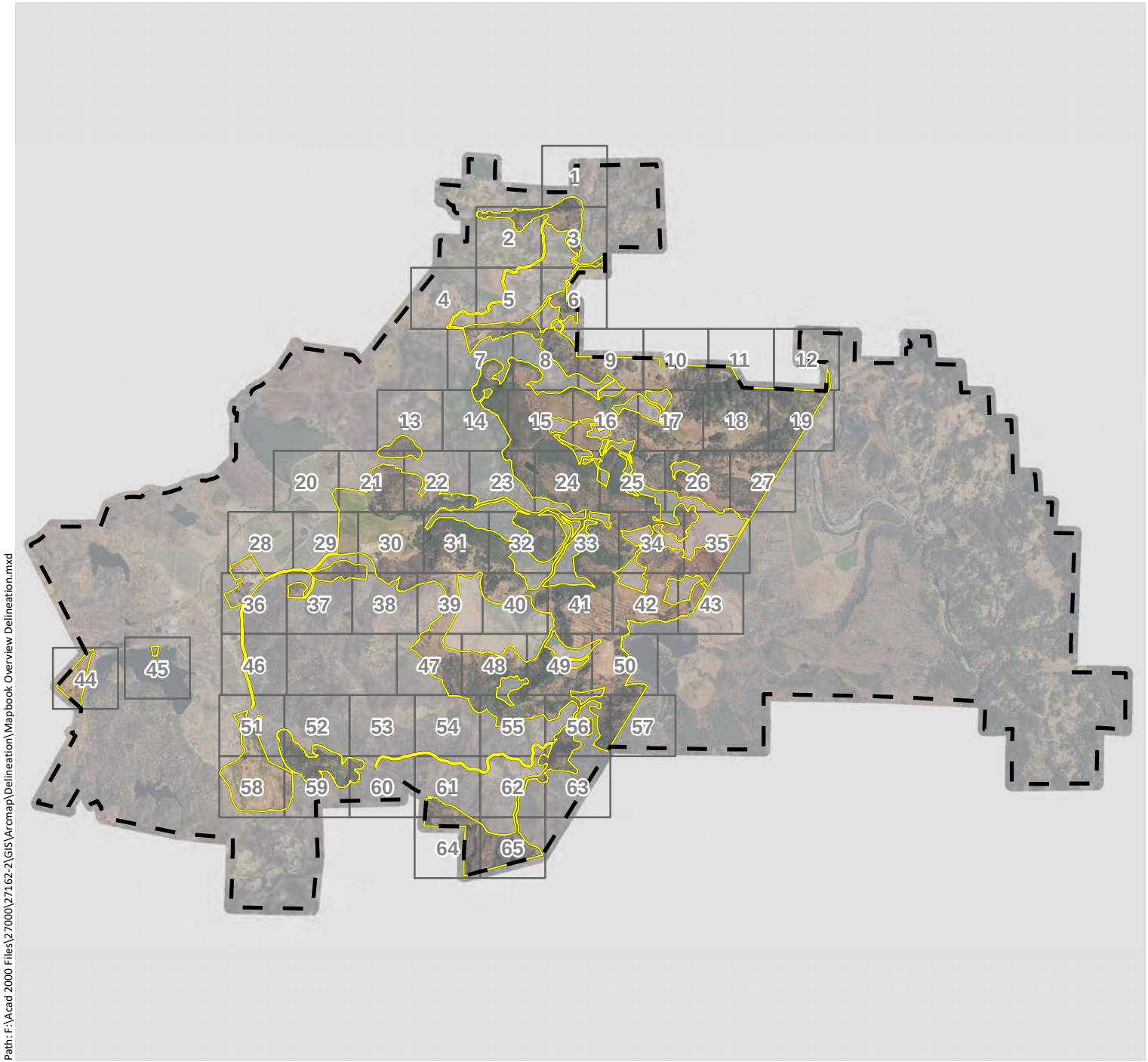
Condition Values: Dry=1
Normal=2
Wet=3

APPENDIX B

POTENTIAL WATERS OF THE UNITED STATES

Appendix B.
Potential Waters of the United States (Overview Sheet 1)

Maha Resort and Guenoc Valley Development, Phase 1



Property Boundary

Phase 1 Study Area

Mapbook Grid

N

0 1 2

Miles

wra
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Mapbook Overview Delineation.mxd

Sources: Hexagon 2016 Aerial, WRA | Prepared By: mrochelle, 6/27/2019

Appendix B. Potential Waters of the United States (Overview Sheet 2)

Maha Resort and Guenoc Valley Development, Phase 1

ID	Acre(s)	Linear Ft	Cowardin Code
Forested Wetlands:			
FW-1	0.0413	n/a	PFO1E
FW-2	0.1074	n/a	PFO1E
FW-3	0.0792	n/a	PFO1E
FW-4	0.0122	n/a	PFO1E
FW-5	0.0028	n/a	PFO1E
FW-6	0.0175	n/a	PFO1E
FW-7	0.0057	n/a	PFO1E
FW-8	0.0624	n/a	PFO1E
FW-9	0.0271	n/a	PFO1E
FW-10	0.0080	n/a	PFO1E
FW-11	0.0227	n/a	PFO1E
FW-12	0.0189	n/a	PFO1E
FW-13	0.2036	n/a	PFO1E
Scrub-Shrub Wetlands:			
SS-1	0.0408	n/a	PSS1C
SS-2	0.9070	n/a	PSS1C
SS-3	0.0329	n/a	PSS1C
SS-4	0.0146	n/a	PSS1C
SS-5	0.0971	n/a	PSS1C
SS-6	0.0565	n/a	PSS1C
Seasonal Wetland Depressions:			
SW-5	0.0290	n/a	PEM2C
SW-29	0.0079	n/a	PEM2C
SW-61	0.0024	n/a	PEM2C
SW-116	0.0063	n/a	PEM2C
SW-120	0.0866	n/a	PEM2C
SW-133	0.0442	n/a	PEM2C
SW-147	0.0070	n/a	PEM2C
SW-166	0.0666	n/a	PEM2C
SW-201	0.0067	n/a	PEM2C
SW-202	0.0178	n/a	PEM2C
SW-204	0.4718	n/a	PEM2C
SW-205	0.0170	n/a	PEM2C
SW-206	0.0090	n/a	PEM2C
SW-207	0.0380	n/a	PEM2C
SW-208	0.1473	n/a	PEM2C
SW-210	0.0577	n/a	PEM2C
SW-213	0.2607	n/a	PEM2C
SW-214	0.4265	n/a	PEM2C
SW-216	0.0724	n/a	PEM2C
SW-219	0.2041	n/a	PEM2C
SW-224	0.1440	n/a	PEM2C
SW-227	0.0311	n/a	PEM2C
SW-232	0.0056	n/a	PEM2C
SW-237	0.1696	n/a	PEM2C
SW-239	0.0166	n/a	PEM2C
SW-240	0.0177	n/a	PEM2C
SW-241	0.0961	n/a	PEM2C
SW-242	0.0268	n/a	PEM2C
SW-243	0.0126	n/a	PEM2C
SW-244	0.0302	n/a	PEM2C
SW-282	0.0052	n/a	PEM2C
Seasonal Wetland Ditches:			
SW-2	0.0016	n/a	PEM2Cx
SW-3	0.0008	n/a	PEM2Cx
SW-6	0.0049	n/a	PEM2Cx
SW-7	0.0184	n/a	PEM2Cx
SW-86	0.0324	n/a	PEM2Cx
SW-148	0.1009	n/a	PEM2Cx
SW-149	0.1049	n/a	PEM2Cx
SW-150	0.0098	n/a	PEM2Cx
SW-199	0.0476	n/a	PEM2Cx
SW-203	0.0190	n/a	PEM2Cx
SW-264	0.1551	n/a	PEM2Cx
SW-270	0.0011	n/a	PEM2Cx
Seasonal Wetland Pond Fringes:			
SW-83	2.6889	n/a	PEM1/2C
SW-145	0.2648	n/a	PEM1/2C
SW-146	0.1737	n/a	PEM1/2C
SW-220	0.0986	n/a	PEM1/2C
SW-223	0.2390	n/a	PEM1/2C
SW-238	0.0501	n/a	PEM1/2C
Seasonal Wetland Seeps/Swales:			
SW-1	0.0333	n/a	PEM2C
SW-4	0.2160	n/a	PEM2C
SW-8	0.0896	n/a	PEM2C
SW-9	0.3478	n/a	PEM2C
SW-10	0.1099	n/a	PEM2C
SW-11	0.0531	n/a	PEM2C
SW-12	0.0475	n/a	PEM2C
SW-13	3.2082	n/a	PEM2C
SW-14	0.0237	n/a	PEM2C
SW-15	0.0263	n/a	PEM2C
SW-16	0.0237	n/a	PEM2C
SW-19	0.0248	n/a	PEM2C
SW-21	0.0602	n/a	PEM2C
SW-22	0.0806	n/a	PEM2C
SW-23	1.2307	n/a	PEM2C
SW-24	0.0406	n/a	PEM2C
SW-25	0.0865	n/a	PEM2C
SW-26	0.0172	n/a	PEM2C
SW-27	0.0175	n/a	PEM2C
SW-28	0.0274	n/a	PEM2C
SW-30	0.1684	n/a	PEM2C
SW-31	0.2309	n/a	PEM2C
SW-32	0.0133	n/a	PEM2C
SW-33	0.0159	n/a	PEM2C
SW-34	0.0306	n/a	PEM2C
SW-35	0.1487	n/a	PEM2C
SW-37	0.0034	n/a	PEM2C
SW-38	0.7058	n/a	PEM2C
SW-39	0.0065	n/a	PEM2C
SW-40	0.1156	n/a	PEM2C
SW-41	0.0695	n/a	PEM2C
SW-42	0.0259	n/a	PEM2C
SW-43	0.1510	n/a	PEM2C
SW-44	0.0411	n/a	PEM2C
SW-45	0.0594	n/a	PEM2C
SW-46	0.0410	n/a	PEM2C
SW-47	0.0988	n/a	PEM2C
SW-48	0.0824	n/a	PEM2C
SW-49	0.0119	n/a	PEM2C
SW-50	0.0071	n/a	PEM2C
SW-51	0.0231	n/a	PEM2C
SW-52	0.0059	n/a	PEM2C
SW-53	0.0566	n/a	PEM2C
SW-54	0.0428	n/a	PEM2C
SW-55	0.0379	n/a	PEM2C
SW-56	0.0301	n/a	PEM2C
SW-57	0.0507	n/a	PEM2C
SW-58	0.0094	n/a	PEM2C
SW-59	0.3355	n/a	PEM2C
SW-60	0.0685	n/a	PEM2C
SW-62	1.8887	n/a	PEM2C
SW-63	0.0796	n/a	PEM2C
SW-64	0.0072	n/a	PEM2C
SW-65	0.0630	n/a	PEM2C
SW-68	0.0270	n/a	PEM2C
SW-69	0.0682	n/a	PEM2C
SW-70	0.0641	n/a	PEM2C
SW-71	0.0337	n/a	PEM2C
SW-72	0.0409	n/a	PEM2C
SW-73	0.0330	n/a	PEM2C
SW-74	0.1921	n/a	PEM2C
SW-75	0.2935	n/a	PEM2C
SW-76	0.0261	n/a	PEM2C
SW-77	0.0195	n/a	PEM2C
SW-78	0.0112	n/a	PEM2C
SW-79	0.0068	n/a	PEM2C
SW-80	0.0181	n/a	PEM2C
SW-81	0.0148	n/a	PEM2C
SW-82	0.0057	n/a	PEM2C
SW-85	0.5099	n/a	PEM2C
SW-87	0.0237	n/a	PEM2C
SW-88	0.1038	n/a	PEM2C
SW-89	0.0521	n/a	PEM2C
SW-90	0.0863	n/a	PEM2C
SW-91	0.1077	n/a	PEM2C
SW-92	0.2041	n/a	PEM2C
SW-93	0.3130	n/a	PEM2C
SW-94	0.1205	n/a	PEM2C
SW-95	0.3620	n/a	PEM2C
SW-96	0.5855	n/a	PEM2C
SW-98	0.0056	n/a	PEM2C
SW-99	0.0162	n/a	PEM2C
SW-101	0.3396	n/a	PEM2C
SW-102	0.0427	n/a	PEM2C
SW-103	0.0152	n/a	PEM2C
SW-104	0.0448	n/a	PEM2C
SW-105	0.0944	n/a	PEM2C
SW-106	0.0249	n/a	PEM2C
SW-109	0.7125	n/a	PEM2C
SW-110	0.0075	n/a	PEM2C
SW-111	0.0388	n/a	PEM2C
SW-112	0.1779	n/a	PEM2C
SW-114	0.0066	n/a	PEM2C
SW-115	0.0096	n/a	PEM2C
SW-117	0.0218	n/a	PEM2C
SW-118	0.0248	n/a	PEM2C
SW-119	0.1181	n/a	PEM2C
SW-121	0.0798	n/a	PEM2C
SW-122	0.3189	n/a	PEM2C
SW-123	0.0862	n/a	PEM2C
SW-124	0.0383	n/a	PEM2C
SW-125	0.8238	n/a	PEM2C
SW-126	0.4132	n/a	PEM2C
SW-127	0.2695	n/a	PEM2C
SW-128	0.2041	n/a	PEM2C
SW-129	0.0205	n/a	PEM2C
SW-130	0.0563	n/a	PEM2C
SW-131	0.0267	n/a	PEM2C
SW-132	0.2442	n/a	PEM2C
SW-134	0.0258	n/a	PEM2C
SW-135	0.2793	n/a	PEM2C
SW-136	1.6376	n/a	PEM2C
SW-137	0.1159	n/a	PEM2C
SW-138	0.0591	n/a	PEM2C
SW-139	0.0191	n/a	PEM2C
SW-140	0.0273	n/a	PEM2C
SW-141	0.0081	n/a	PEM2C
SW-142	0.0161	n/a	PEM2C
SW-143	0.1609	n/a	PEM2C
SW-144	0.1722	n/a	PEM2C
SW-151	0.0145	n/a	PEM2C
SW-152	0.0116	n/a	PEM2C
SW-153	0.0198	n/a	PEM2C
SW-154	0.0660	n/a	PEM2C
SW-155	0.0057	n/a	PEM2C
SW-156	0.0026	n/a	PEM2C
SW-157	0.0094	n/a	PEM2C
SW-158	0.2368	n/a	PEM2C
SW-159	0.0044	n/a	PEM2C
SW-160	0.0514	n/a	PEM2C
SW-161	0.0366	n/a	PEM2C
SW-162	0.0826	n/a	PEM2C
SW-163	0.1771	n/a	PEM2C
SW-164	0.0116	n/a	PEM2C
SW-165	0.0051	n/a	PEM2C
SW-167	0.0295	n/a	PEM2C
SW-168	0.0398	n/a	PEM2C
SW-169	0.0522	n/a	PEM2C
SW-170	0.0263	n/a	PEM2C
SW-173	0.0469	n/a	PEM2C
SW-178	0.0077	n/a	PEM2C
SW-180	0.0106	n/a	PEM2C
SW-181	0.0369	n/a	PEM2C
SW-182	0.1629	n/a	PEM2C
SW-183	0.0068	n/a	PEM2C
SW-184	0.0212	n/a	PEM2C
SW-185	0.0687	n/a	PEM2C
SW-186	0.0099	n/a	PEM2C
SW-187	1.0058	n/a	PEM2C
SW-188	0.1553	n/a	PEM2C
SW-189	0.0493	n/a	PEM2C
SW-190	0.0108	n/a	PEM2C
SW-191	0.0311	n/a	PEM2C
SW-200	0.0253	n/a	PEM2C
SW-209	0.0726	n/a	PEM2C
SW-211	0.0741	n/a	PEM2C
SW-212	0.0215	n/a	PEM2C
SW-215	0.2259	n/a	PEM2C
SW-217	0.0104	n/a	PEM2C
SW-218	0.2746	n/a	PEM2C
SW-221	0.3180	n/a	PEM2C
SW-222	0.2068	n/a	PEM2C
SW-225	2.0332	n/a	PEM2C
SW-226	0.3102	n/a	PEM2C
SW-228	0.7928	n/a	PEM2C
SW-229	0.0266	n/a	PEM2C
SW-230	2.1539	n/a	PEM2C
SW-231	0.1601	n/a	PEM2C
SW-233	0.1575	n/a	PEM2C
SW-234	0.2036	n/a	PEM2C
SW-235	0.1962	n/a	PEM2C
SW-236	0.0888	n/a	PEM2C
SW-245	0.1539	n/a	PEM2C
SW-246	0.6712	n/a	PEM2C
SW-247	0.3310	n/a	PEM2C
SW-248	0.3266	n/a	PEM2C
SW-249	0.1678	n/a	PEM2C
SW-250	0.0818	n/a	PEM2C
SW-251	0.1503	n/a	PEM2C
SW-252	0.6011	n/a	PEM2C
SW-253	1.3000	n/a	PEM2C
SW-254	4.1211	n/a	PEM2C
SW-255	0.5148	n/a	PEM2C
SW-256	0.6062	n/a	PEM2C
SW-257	0.0785	n/a	PEM2C
SW-258	0.0064	n/a	PEM2C
SW-259	0.0492	n/a	PEM2C
SW-260	0.1095	n/a	PEM2C
SW-261	0.5249	n/a	PEM2C
SW-265	0.0546	n/a	PEM2C
SW-266	0.0092	n/a	PEM2C
SW-271	0.1292	n/a	PEM2C
SW-272	0.2284	n/a	PEM2C
SW-273	0.0133	n/a	PEM2C
SW-274	0.0223	n/a	PEM2C
SW-275	0.0042	n/a	PEM2C
SW-276	0.0391	n/a	PEM2C
SW-277	0.0614	n/a	PEM2C
SW-278	0.0260	n/a	PEM2C
SW-279	0.1576	n/a	PEM2C
SW-280	0.6412	n/a	PEM2C
SW-281	0.1840	n/a	PEM2C
SW-284	0.0006	n/a	PEM2C
SW-285	0.0088	n/a	PEM2C
SW-286	0.4823	n/a	PEM2C
SW-287	0.0572	n/a	PEM2C
SW-357	0.0064	n/a	PEM2C
Seasonal Wetland Wet Meadows:			
SW-36	11.0045	n/a	PEM2C
SW-66	1.9125	n/a	PEM2C
SW-97	2.0580	n/a	PEM2C
SW-113	1.6599	n/a	PEM2C
SW-171	0.1711	n/a	PEM2C
SW-172	0.1051	n/a	PEM2C
SW-174	0.0076	n/a	PEM2C
SW-175	0.1230	n/a	PEM2C
SW-176	0.0131	n/a	PEM2C
SW-177	0.0138	n/a	PEM2C
SW-179	0.1228	n/a	PEM2C
SW-192	0.0435	n/a	PEM2C
SW-193	0.5191	n/a	PEM2C
SW-194	0.4835	n/a	PEM2C
SW-195	3.1235	n/a	PEM2C
SW-196	0.0047	n/a	PEM2C
SW-197	0.3321	n/a	PEM2C
SW-198	0.1883	n/a	PEM2C
SW-283	0.0428	n/a	PEM2C
SW-288	0.0438	n/a	PEM2C
SW-289	0.0039	n/a	PEM2C
SW-290	0.0029	n/a	PEM2C
SW-291	0.0063	n/a	PEM2C
SW-292	17.2090	n/a	PEM2C
SW-293	0.4307	n/a	PEM2C
SW-294	0.0492	n/a	PEM2C
SW-295	0.0634	n/a	PEM2C
SW-296	0.0530	n/a	PEM2C
SW-297	0.0074	n/a	PEM2C
SW-298	0.0497	n/a	PEM2C
SW-299	0.0657	n/a	PEM2C
SW-300	0.0589	n/a	PEM2C
SW-301	0.0655	n/a	PEM2C
SW-302	0.2366	n/a	PEM2C
SW-303	0.0238	n/a	PEM2C
SW-304	0.0252	n/a	PEM2C
SW-305	0.0729	n/a	PEM2C
SW-306	0.1234	n/a	PEM2C
SW-307	0.0260	n/a	PEM2C
SW-308	0.0572	n/a	PEM2C
SW-309	0.0019	n/a	PEM2C
SW-310	0.0029	n/a	PEM2C
SW-311	0.0091	n/a	PEM2C
SW-312	0.0152	n/a	PEM2C
SW-313	0.0043	n/a	PEM2C
SW-314	0.0425	n/a	PEM2C
SW-315	0.0020	n/a	PEM2C
SW-316	0.0031	n/a	PEM2C
SW-317	0.0045	n/a	PEM2C
SW-318	0.0024	n/a	PEM2C
SW-319	0.0036	n/a	PEM2C
SW-320	0.0045	n/a	PEM2C
SW-321	0.0056	n/a	PEM2C
SW-322	0.0018	n/a	PEM2C
SW-323	0.0025	n/a	PEM2C
SW-324	0.0024	n/a	PEM2C
SW-325	0.0290	n/a	PEM2C
SW-326	0.2592	n/a	PEM2C
SW-327	0.0138	n/a	PEM2C
SW-328	0.0286	n/a	PEM2C
SW-329	0.0014	n/a	PEM2C
SW-330	0.0095	n/a	PEM2C
SW-331	0.7218	n/a	PEM2C
SW-332	0.0021	n/a	PEM2C
SW-333	3.2249	n/a	PEM2C
SW-334	0.1810	n/a	PEM2C
SW-335	0.0095	n/a	PEM2C
SW-336	0.0029	n/a	PEM2C
SW-337	0.0104	n/a	PEM2C
SW-338	0.0158	n/a	PEM2C
SW-339	0.0122	n/a	PEM2C
SW-340	0.0137	n/a	PEM2C
SW-341	0.0137	n/a	PEM2C
SW-342	0.0548	n/a	PEM2C
SW-343	0.0803	n/a	PEM2C
SW-344	0.0025	n/a	PEM2C
SW-345	0.0222	n/a	PEM2C
SW-346	0.0129	n/a	PEM2C
SW-347	0.0082	n/a	PEM2C
SW-348	0.0101	n/a	PEM2C
SW-349	0.0051	n/a	PEM2C
SW-350	0.0020	n/a	PEM2C
Stream Fringe/In-Stream Wetlands:			
SF-1	0.0792	n/a	R4SB7
SF-2	0.2426	n/a	R4SB7
SF-3	0.6559	n/a	R4SB7
SF-4	0.0962	n/a	R4SB7
SF-5	0.0101	n/a	R4SB7
SF-6	0.0415	n/a	R4SB7
SF-7	0.0260	n/a	R4SB7
SF-8	0.0223	n/a	R4SB7
SF-9	0.0405	n/a	R4SB7
SF-10	0.0584	n/a	R4SB7
SF-11	0.0321	n/a	R4SB7
SF-12	0.2075	n/a	R4SB7
SF-13	0.1329	n/a	R4SB7
SF-14	0.1123	n/a	R4SB7
SF-15	0.1249	n/a	R4SB7
SF-16	0.0249	n/a	R4SB7
SF-17	0.0234	n/a	R4SB7
SF-18	1.5624	n/a	R4SB7
SF-19	0.3607	n/a	R4SB7
SF-20	0.0391	n/a	R4SB7
SF-21	0.0446	n/a	R4SB7
SF-22	0.0539	n/a	R4SB7
SF-23	0.2032	n/a	R4SB7
SF-24	0.0138	n/a	R4SB7
SF-25	0.0486	n/a	R4SB7
SF-26	0.0689	n/a	R4SB7
SF-27	0.1303	n/a	R4SB7
SF-28	0.1320	n/a	R4SB7
SF-29	0.1869	n/a	R4SB7
SF-30	0.1509	n/a	R4SB7
SF-31	0.4191	n/a	R4SB7
SF-32	0.2762	n/a	R4SB7
SF-33	0.4897	n/a	R4SB7
SF-34	0.0078	n/a	R4SB7
SF-35	0.0057	n/a	R4SB7
SF-36	0.1170	n/a	R4SB7
SF-37	0.8686	n/a	R4SB7
SF-38	0.0539	n/a	R4SB7
SF-39	0.0877	n/a	R4SB7
SF-40	0.0164	n/a	R4SB7
SF-41	0.0168	n/a	R4SB7
SF-42	0.0053	n/a	R4SB7
SF-43	0.0246	n/a	R4SB7
SF-44	0.0121	n/a	R4SB7
SF-45	0.2368	n/a	R4SB7
SF-46	0.0176	n/a	R4SB7
SF-47	0.3395	n/a	R4SB7
SF-48	0.0856	n/a	R4SB7
SF-49	0.5623	n/a	R4SB7
SF-50	0.1462	n/a	R4SB7
SF-51	0.0143	n/a	R4SB7
SF-52	0.0110	n/a	R4SB7
SF-53	0.6031	n/a	R4SB7
SF-54	0.0342	n/a	R4SB7
SF-55	0.9177	n/a	R4SB7
SF-56	0.0399	n/a	R4SB7
SF-57	0.0501	n/a	R4SB7
SF-58	0.0044	n/a	R4SB7
SF-59	0.0376	n/a	R4SB7
SF-60	0.0910	n/a	R4SB7
SF-61	0.2600	n/a	R4SB7
SF-62	0.2671	n/a	R4SB7
SF-63	0.0167	n/a	R4SB7
SF-64	0.0492	n/a	R4SB7
SF-65	0.1461	n/a	R4SB7
SF-66	0.1263	n/a	R4SB7
SF-67	0.0869	n/a	R4SB7
SF-68	0.4860	n/a	R4SB7
SF-69	0.1654	n/a	R4SB7
SF-70	0.0836	n/a	R4SB7
SF-71	0.0466	n/a	R4SB7
SF-72	0.7355	n/a	R4SB7
SF-73	0.0127	n/a	R4SB7
SF-74	0.0071	n/a	R4SB7
SF-75	0.0069	n/a	R4SB7
SF-76	0.1645	n/a	R4SB7
SF-77	0.0788	n/a	R4SB7
SF-78	0.3720	n/a	R4SB7
SF-79	1.3640	n/a	R4SB7
SF-80	0.0324	n/a	R4SB7
SF-81	0.0116	n/a	R4SB7
SF-82	1.2546	n/a	R4SB7
SF-83	0.2418	n/a	R4SB7
SF-84	0.1566	n/a	R4SB7
SF-85	0.2568	n/a	R4SB7
SF-86	0.0660	n/a	R4SB7
SF-87	0.1121	n/a	R4SB7
SF-88	1.6319	n/a	R4SB7
SF-89	1.1460	n/a	R4SB7
SF-90	0.0596	n/a	R4SB7
SF-91	0.5244	n/a	R4SB7
SF-92	0.6891	n/a	R4SB7
SF-93	1.0083	n/a	R4SB7
SF-94	1.2654	n/a	R4SB7
SF-95	0.0298	n/a	R4SB7
SF-96	0.0206	n/a	R4SB7
SF-97	0.0311	n/a	R4SB7
SF-98	0.1037	n/a	R4SB7
SF-99	0.0858	n/a	R4SB7
SF-100	0.1362	n/a	R4SB7
SF-101	0.0062	n/a	R4SB7
SF-102	0.0008	n/a	R4SB7
SF-103	0.0371	n/a	R4SB7
SF-104	0.0696	n/a	R4SB7
SF-105	0.0791	n/a	R4SB7
SF-106	0.0627	n/a	R4SB7
SF-107	0.0515	n/a	R4SB7
SF-108	0.0094	n/a	R4SB7
SF-109	0.0121	n/a	R4SB7
SF-110	0.0196	n/a	R4SB7
SF-111	0.0251	n/a	R4SB7
SF-112	0.1361	n/a	R4SB7
SF-113	0.3493	n/a	R4SB7
SF-114	0.0088	n/a	R4SB7
SF-115	0.0201	n/a	R4SB7
SF-116	0.0094	n/a	R4SB7
SF-117	0.0948	n/a	R4SB7
SF-118	0.0288	n/a	R4SB7
SF-119	0.1127	n/a	R4SB7
SF-120	0.0626	n/a	R4SB7
SF-121	0.3787	n/a	R4SB7
SF-122	0.5175	n/a	R4SB7
SF-123	0.0422	n/a	R4SB7
SF-124	0.0167	n/a	R4SB7
SF-125	0.0138	n/a	R4SB7
SF-126	0.0070	n/a	R4SB7
SF-127	0.0306	n/a	R4SB7
SF-128	0.0049	n/a	R4SB7
SF-129	0.0063	n/a	R4SB7
SF-130	0.0191	n/a	R4SB7
SF-131	0.0652	n/a	R4SB7
Ephemeral Ditch:			
ED-1	0.0345	1,504	R4SBA/Cx
ED-2	0.0021	89	R4SBA/Cx
ED-3	0.0062	312	R4SBA/Cx
ED-4	0.0698	1,050	R4SBA/Cx
ED-5	0.0032	45	R4SBA/Cx
ED-6	0.0288	628	R4SBA/Cx
ED-7	0.0251	549	R4SBA/Cx
ED-8	0.0308	673	R4SBA/Cx
ED-9	0.0015	64	R4SBA/Cx
ED-10	0.0098	427	R4SBA/Cx
ED-11	0.0048	208	R4SBA/Cx
ED-12	0.0098	215	R4SBA/Cx
ED-13	0.0081	177	R4SBA/Cx
ED-14	0.0084	181	R4SBA/Cx
ED-15	0.0068	297	R4SBA/Cx
Ephemeral Stream:			
ES-1	0.0131	189	R4SBA
ES-2	0.0238	345	R4SBA
ES-3	0.0632	689	R4SBA
ES-4	0.1219	1,329	R4SBA
ES-5	0.0091	99	R4SBA
ES-6	0.0188	272	R4SBA
ES-7	0.0225	242	R4SBA
ES-8	0.0014	59	R4SBA
ES-9	0.0377	396	R4SBA
ES-10	0.0040	72	R4SBA
ES-11	0.0761	1,656	R4SBA
ES-12	0.0309	672	R4SBA
ES-13	0.0262	472	R4SBA
ES-14	0.0060	263	R4SBA
ES-15	0.0041	34	R4SBA
ES-16	0.0083	73	R4SBA
ES-17	0.0016	33	R4SBA
ES-18	0.0022	48	R4SBA
ES-19	0.0055	26	R4SBA
ES-20	0.0184	401	R4SBA
ES-21	0.0846	686	R4SBA
ES-22	0.0097	209	R4SBA
ES-23	0.0087	192	R4SBA
ES-24	0.0013	57	R4SBA
ES-25	0.0049	41	R4SBA
ES-26	0.0114	97	R4SBA
ES-27	0.0248	226	R4SBA
ES-28	0.8373	2,088	R4SBA
ES-29	0.0116	253	R4SBA
ES-30	0.0248	269	R4SBA
ES-31	0.0052	224	R4SBA
ES-32	0.0902	1,069	R4SBA
ES-33	0.0562	801	R4SBA
ES-34	0.0180	783	R4SBA
ES-35	0.0163	714	R4SBA
ES-36	0.0022	95	R4SBA
ES-37	0.0427	265	R4SBA
ES-38	0.0039	85	R4SBA
ES-39	0.6902	3,663	R4SBA
ES-40	0.0006	26	R4SBA
ES-41	0.0022	100	R4SBA
ES-42	0.0062	128	R4SBA
ES-43	0.0022	47	R4SBA
ES-44	0.0630	911	R4SBA
ES-45	0.0084	175	R4SBA
ES-46	0.0086	372	R4SBA
ES-47	0.0108	473	R4SBA
ES-48	0.0063	275	R4SBA
ES-49	0.0120	122	R4SBA
ES-50	0.0055	49	R4SBA
ES-51	0.0499	714	R4SBA
ES-52	0.0249	719	R4SBA
ES-53	0.0015	46	R4SBA
ES-54	0.0017	51	R4SBA
ES-55	0.1007	866	R4SBA
ES-58	0.0789	1,190	R4SBA
ES-59	0.0199	606	R4SBA
ES-60	0.0056	61	R4SBA
ES-61	0.0916	794	R4SBA
ES-62	0.0059	124	R4SBA
ES-63	0.0028	119	R4SBA
ES-64	0.0073	155	R4SBA
ES-65	0.1111	1,019	R4SBA
ES-66	0.0030	126	R4SBA
ES-67	0.0029	124	R4SBA
ES-68	0.0188	409	R4SBA
ES-69	0.0234	254	R4SBA
ES-70	0.0075	164	R4SBA
ES-71	0.0094	204	R4SBA
ES-72	0.0599	1,022	R4SBA
ES-73	0.0011	40	R4SBA
ES-74	0.0017	72	R4SBA
ES-75	0.0011	23	R4SBA
ES-76	0.0086	188	R4SBA
ES-77	0.0062	135	R4SBA
ES-78	0.0079	172	R4SBA
ES-79	0.0023	49	R4SBA
ES-80	0.0134	292	R4SBA
ES-81	0.0065	138	R4SBA
ES-82	0.0281	407	R4SBA
ES-83	0.0037	159	R4SBA
ES-84	0.0026	112	R4SBA
ES-85	0.0018	77	R4SBA
ES-86	0.0828	666	R4SBA
ES-87	0.1036	1,225	R4SBA
ES-88	0.0058	124	R4SBA
ES-89	0.0277	478	R4SBA
ES-91	0.0016	27	R4SBA
ES-92	0.0001	4	R4SBA
ES-93	0.0141	224	R4SBA
ES-94	0.0039	55	R4SBA
ES-95	0.0293	208	R4SBA
ES-96	0.0428	628	R4SBA
ES-97	0.0007	14	R4SBA
ES-98	0.0008	17	R4SBA
ES-99	0.0012	24	R4SBA
ES-100	0.0005	10	R4SBA
ES-101	0.0075	164	R4SBA
ES-102	0.0026	56	R4SBA
ES-103	0.0026	55	R4SBA
ES-104	0.0122	265	R4SBA
ES-105	0.0120	263	R4SBA
ES-106	0.0049	106	R4SBA
ES-107	0.0219	426	R4SBA
ES-108	0.0659	1,074	R4SBA
ES-109	0.0090	387	R4SBA
ES-110	0.0043	183	R4SBA
ES-111	0.0286	1,239	R4SBA
ES-112	0.0082	353	R4SBA
ES-113	0.0044	191	R4SBA
ES-114	0.0018	74	R4SBA
ES-115	0.0054	235	R4SBA
ES-116	0.0276	388	R4SBA
ES-117	0.0210	304	R4SBA
ES-118	0.0211	301	R4SBA
ES-119	0.0183	268	R4SBA
ES-120	0.0117	506	R4SBA
ES-121	0.0283	614	R4SBA
ES-122	0.0181	393	R4SBA
ES-123	0.0205	894	R4SBA
ES-124	0.0133	288	R4SBA
ES-125	0.0157	340	R4SBA
ES-126	0.0162	351	R4SBA
ES-127	0.0308	670	R4SBA
ES-128	0.0142	308	R4SBA
ES-129	0.0062	268	R4SBA
ES-130	0.0137	296	R4SBA
ES-131	0.0662	959	R4SBA
ES-132	0.0085	369	R4SBA
ES-133	0.0037	162	R4SBA
ES-134	0.0654	788	R4SBA
ES-135	0.0051	106	R4SBA
ES-136	0.0047	100	R4SBA
ES-137	0.0050	216	R4SBA
ES-138	0.0028	116	R4SBA
ES-139	0.0054	238	R4SBA
ES-140	0.0063	274	R4SBA
ES-141	0.0033	146	R4SBA
ES-142	0.1562	1,519	R4SBA
ES-143	0.0257	550	R4SBA
ES-144	0.0114	206	R4SBA
ES-145	0.0029	63	R4SBA
ES-146	0.0050	106	R4SBA
ES-147	0.0090	196	R4SBA
ES-148	0.0533	577	R4SBA
ES-149	0.0053	118	R4SBA
ES-150	0.0045	99	R4SBA
ES-151	0.0142	308	R4SBA
ES-152	0.0207	373	R4SBA
ES-153	0.0006	24	R4SBA
ES-154	0.0665	1,284	R4SBA
ES-155	0.0021	83	R4SBA
ES-156	0.0036	139	R4SBA
ES-157	0.0156	335	R4SBA
ES-158	0.0435	781	R4SBA
ES-159	0.0051	217	R4SBA
ES-160	0.0016	69	R4SBA
ES-161	0.0033	142	R4SBA
ES-162	0.0118	512	R4SBA
ES-163	0.0152	235	R4SBA
ES-164	0.0056	211	R4SBA
ES-165	0.0076	263	R4SBA
ES-166	0.0034	148	R4SBA
ES-167	0.0143	333	R4SBA
ES-168	0.0058	242	R4SBA
ES-169	0.0330	565	R4SBA
ES-170	0.0136	575	R4SBA
ES-171	0.0092	198	R4SBA
ES-172	0.0022	95	R4SBA
ES-173	0.0063	135	R4SBA
ES-174	0.0056	244	R4SBA
ES-175	0.0258	696	R4SBA
ES-176	0.0037	153	R4SBA
ES-177	0.0111	241	R4SBA
ES-178	0.1219	1,349	R4SBA
ES-179	0.0079	167	R4SBA
ES-180	0.0238	260	R4SBA
ES-181	0.0025	92	R4SBA
ES-182	0.0288	626	R4SBA
ES-183	0.0098	210	R4SBA
ES-184	0.0192	403	R4SBA
ES-185	0.0834	1,252	R4SBA
ES-186	0.0086	188	R4SBA
ES-187	0.0064	276	R4SBA
ES-188	0.0149	316	R4SBA
ES-189	0.0022	48	R4SBA
ES-190	0.0014	58	R4SBA
ES-191	0.0115	487	R4SBA
ES-192	0.0088	382	R4SBA
ES-193	0.0012	50	R4SBA
ES-194	0.0373	809	R4SBA
ES-195	0.0027	108	R4SBA
ES-196	0.0093	358	R4SBA
ES-197	0.0215	320	R4SBA
ES-198	0.0047	203	R4SBA
ES-199	0.0109	470	R4SBA
ES-200	0.0052	225	R4SBA
ES-201	0.0006	24	R4SBA
ES-202	0.0042	183	R4SBA
ES-203	0.0009	39	R4SBA
ES-204	0.0036	156	R4SBA
ES-205	0.0125	272	R4SBA
ES-206	0.0126	240	R4SBA
ES-207	0.0031	61	R4SBA
ES-208	0.0089	218	R4SBA
ES-209	0.0074	324	R4SBA
ES-210	0.0012	52	R4SBA
ES-211	0.0061	266	R4SBA
ES-212	0.0050	213	R4SBA
ES-213	0.1936	2,607	R4SBA
ES-214	0.0046	116	R4SBA
ES-215	0.0024	95	R4SBA
ES-216	0.0118	242	R4SBA
ES-217	0.0174	468	R4SBA
ES-218	0.0049	103	R4SBA
ES-219	0.0018	77	R4SBA
ES-220	0.0436	795	R4SBA
ES-221	0.0133	287	R4SBA
ES-222	0.0113	249	R4SBA
ES-223	0.0014	60	R4SBA
ES-224	0.0047	196	R4SBA
ES-225	0.0094	200	R4SBA
ES-226	0.0300	327	R4SBA
ES-227	0.0983	1,071	R4SBA
ES-228	0.0027	61	R4SBA
ES-229	0.0144	207	R4SBA
ES-230	0.0030	132	R4SBA
ES-231	0.0290	550	R4SBA
ES-232	0.0054	141	R4SBA
ES-233	0.0077	196	R4SBA
ES-234	0.0094	163	R4SBA
ES-235	0.0016	59	R4SBA
ES-236	0.0444	487	R4SBA
ES-237	0.0522	431	R4SBA
ES-238	0.0097	166	R4SBA
ES-239	0.0100	422	R4SBA
ES-240	0.0267	426	R4SBA
ES-241	0.0062	259	R4SBA
ES-242	0.0054	211	R4SBA
ES-243	0.0030	66	R4SBA
ES-244	0.0258	948	R4SBA
ES-245	0.0018	74	R4SBA
ES-246	0.0012	50	R4SBA
ES-247	0.0014	52	R4SBA
ES-248	0.0437	1,051	R4SBA
ES-249	0.0058	245	R4SBA
ES-250	0.0047	202	R4SBA
ES-251	0.0074	321	R4SBA
ES-252	0.0074	317	R4SBA
ES-253	0.0043	188	R4SBA
ES-254	0.0024	100	R4SBA
ES-255	0.0251	347	R4SBA

Summary:

Type	Acre(s)	Linear Ft.	Cowardin Code
Potential Jurisdictional Wetlands:			
Forested Wetlands (FW)	0.61	n/a	PFO1E
Scrub-Shrub Wetlands (SS)	1.15	n/a	PSS1C
Seasonal Wetland Depressions (SW)	2.53	n/a	PEM2C
Seasonal Wetland Ditches (SW)	0.50	n/a	PEM2Cx
Seasonal Wetland Pond Fringes (SW)	3.52	n/a	PEM1/2C
Seasonal Wetland Seeps/Swales (SW)	42.40	n/a	PEM2C
Seasonal Wetland Wet Meadows (SW)	45.46	n/a	PEM2C
Stream Fringe/In-Stream Wetlands (SF)	26.15	n/a	R4SB7
Total Wetlands -	***122.32***	***n/a***	***n/a***
Potential Jurisdictional Waters:			
Ephemeral Ditch (ED)	0.25	6,419	R4SBA/Cx
Ephemeral Stream (ES)	20.73	301,130	R4SBA
Intermittent Stream (IS)	13.68	61,795	R4SBC
Perennial Stream (PS)	23.63	26,039	R5UBF & R5UBF/H
Open Waters (OW)	10.70	n/a	PUBK
Total Waters -	***68.99***	***395,383***	***n/a***
Total Wetlands and Waters -	***191.31***	***395,383***	***n/a***

wra ENVIRONMENTAL CONSULTANTS

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Sources: WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Overview Sheet 3)

Maha Resort and Guenoc Valley Development, Phase 1

ID	Acre(s)	Linear Ft	Cowardin Code
Ephemeral Stream (continued):			
ES-256	0.0093	399	R4SBA
ES-257	0.0273	728	R4SBA
ES-258	0.0036	149	R4SBA
ES-259	0.0050	207	R4SBA
ES-260	0.0079	335	R4SBA
ES-261	0.0051	221	R4SBA
ES-262	0.0054	233	R4SBA
ES-263	0.0084	341	R4SBA
ES-264	0.0149	416	R4SBA
ES-265	0.0032	136	R4SBA
ES-266	0.0194	487	R4SBA
ES-267	0.0015	58	R4SBA
ES-268	0.0449	828	R4SBA
ES-269	0.0501	904	R4SBA
ES-270	0.0091	391	R4SBA
ES-271	0.0064	276	R4SBA
ES-272	0.0140	269	R4SBA
ES-273	0.0082	176	R4SBA
ES-274	0.0046	198	R4SBA
ES-275	0.0937	1,017	R4SBA
ES-276	0.0105	93	R4SBA
ES-277	0.0133	313	R4SBA
ES-278	0.0016	71	R4SBA
ES-279	0.0025	110	R4SBA
ES-280	0.0262	624	R4SBA
ES-281	0.0027	115	R4SBA
ES-282	0.0564	1,033	R4SBA
ES-283	0.0013	49	R4SBA
ES-284	0.0092	194	R4SBA
ES-285	0.0025	112	R4SBA
ES-286	0.0041	91	R4SBA
ES-287	0.0642	1,391	R4SBA
ES-288	0.0189	410	R4SBA
ES-289	0.0122	264	R4SBA
ES-290	0.0189	414	R4SBA
ES-291	0.0016	64	R4SBA
ES-292	0.0016	69	R4SBA
ES-293	0.0018	81	R4SBA
ES-294	0.0050	221	R4SBA
ES-295	0.0030	130	R4SBA
ES-296	0.0006	12	R4SBA
ES-297	0.0820	1,783	R4SBA
ES-298	0.0041	116	R4SBA
ES-299	0.1254	1,360	R4SBA
ES-300	0.0915	997	R4SBA
ES-301	0.0760	826	R4SBA
ES-302	0.1081	1,182	R4SBA
ES-303	0.2552	625	R4SBA
ES-304	0.0418	303	R4SBA
ES-305	0.0241	699	R4SBA
ES-306	0.0023	98	R4SBA
ES-307	0.0030	130	R4SBA
ES-308	0.0069	200	R4SBA
ES-309	0.0016	68	R4SBA
ES-310	0.0273	624	R4SBA
ES-311	0.0067	287	R4SBA
ES-312	0.0186	327	R4SBA
ES-313	0.0358	390	R4SBA
ES-314	0.0042	176	R4SBA
ES-315	0.0192	368	R4SBA
ES-316	0.0072	224	R4SBA
ES-317	0.0024	69	R4SBA
ES-318	0.3141	2,366	R4SBA
ES-319	0.0243	1,054	R4SBA
ES-320	0.0054	232	R4SBA
ES-321	0.0064	277	R4SBA
ES-322	0.0046	63	R4SBA
ES-323	0.0009	37	R4SBA
ES-324	0.0128	557	R4SBA
ES-325	0.0017	74	R4SBA
ES-326	0.0139	603	R4SBA
ES-327	0.0127	272	R4SBA
ES-328	0.0022	92	R4SBA
ES-329	0.0416	795	R4SBA
ES-330	0.0086	186	R4SBA
ES-331	0.0102	221	R4SBA
ES-332	0.0234	337	R4SBA
ES-333	0.0131	275	R4SBA
ES-334	0.0041	175	R4SBA
ES-335	0.0187	404	R4SBA
ES-336	0.0146	424	R4SBA
ES-337	0.0225	477	R4SBA
ES-338	0.0196	424	R4SBA
ES-339	0.0486	866	R4SBA
ES-340	0.0062	269	R4SBA
ES-341	0.0070	152	R4SBA
ES-342	0.0286	315	R4SBA
ES-343	0.0025	109	R4SBA
ES-344	0.0161	187	R4SBA
ES-345	0.0038	171	R4SBA
ES-346	0.0551	599	R4SBA
ES-347	0.0143	211	R4SBA
ES-348	0.0047	151	R4SBA
ES-349	0.0011	24	R4SBA
ES-350	0.0056	236	R4SBA
ES-351	0.0026	115	R4SBA
ES-352	0.1661	822	R4SBA
ES-353	0.0212	459	R4SBA
ES-354	0.0226	656	R4SBA
ES-355	0.0026	73	R4SBA
ES-356	0.0018	44	R4SBA
ES-357	0.0019	56	R4SBA
ES-358	0.0134	395	R4SBA
ES-359	0.0007	32	R4SBA
ES-361	0.0115	244	R4SBA
ES-362	0.0198	285	R4SBA
ES-363	0.0325	351	R4SBA
ES-365	0.0034	48	R4SBA
ES-366	0.0021	44	R4SBA
ES-367	0.0035	50	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-368	0.0053	75	R4SBA
ES-369	0.0056	121	R4SBA
ES-370	0.0013	29	R4SBA
ES-371	0.0015	31	R4SBA
ES-372	0.0010	19	R4SBA
ES-373	0.0010	45	R4SBA
ES-374	0.0261	142	R4SBA
ES-375	0.0039	167	R4SBA
ES-376	0.0187	580	R4SBA
ES-377	0.0181	261	R4SBA
ES-378	0.0026	109	R4SBA
ES-379	0.0033	144	R4SBA
ES-380	0.0054	77	R4SBA
ES-381	0.0094	136	R4SBA
ES-382	0.0669	962	R4SBA
ES-383	0.0321	463	R4SBA
ES-384	0.0900	782	R4SBA
ES-385	0.0318	276	R4SBA
ES-386	0.0553	953	R4SBA
ES-387	0.0179	774	R4SBA
ES-388	0.0017	73	R4SBA
ES-389	0.0087	376	R4SBA
ES-390	0.0033	48	R4SBA
ES-391	0.0175	379	R4SBA
ES-392	0.1137	1,237	R4SBA
ES-393	0.0259	280	R4SBA
ES-394	0.0030	128	R4SBA
ES-395	0.0014	61	R4SBA
ES-396	0.0016	70	R4SBA
ES-397	0.0641	928	R4SBA
ES-398	0.0022	94	R4SBA
ES-399	0.0018	80	R4SBA
ES-400	0.0172	350	R4SBA
ES-401	0.0586	856	R4SBA
ES-402	0.0027	113	R4SBA
ES-403	0.0056	79	R4SBA
ES-404	0.0075	228	R4SBA
ES-405	0.0087	250	R4SBA
ES-406	0.0571	935	R4SBA
ES-407	0.0117	126	R4SBA
ES-408	0.0065	72	R4SBA
ES-409	0.0016	20	R4SBA
ES-410	0.0115	122	R4SBA
ES-411	0.0055	77	R4SBA
ES-412	0.0369	320	R4SBA
ES-413	0.0182	159	R4SBA
ES-414	0.0024	105	R4SBA
ES-415	0.0090	394	R4SBA
ES-416	0.0008	31	R4SBA
ES-417	0.0238	344	R4SBA
ES-418	0.0129	558	R4SBA
ES-419	0.0104	453	R4SBA
ES-420	0.0028	116	R4SBA
ES-421	0.0011	48	R4SBA
ES-422	0.2470	2,671	R4SBA
ES-423	0.0040	165	R4SBA
ES-424	0.0043	246	R4SBA
ES-425	0.0038	106	R4SBA
ES-426	0.0030	128	R4SBA
ES-427	0.0183	423	R4SBA
ES-428	0.0052	228	R4SBA
ES-429	0.0015	64	R4SBA
ES-430	0.0021	90	R4SBA
ES-431	0.0014	60	R4SBA
ES-432	0.0009	37	R4SBA
ES-433	0.0016	68	R4SBA
ES-434	0.0012	53	R4SBA
ES-435	0.0653	945	R4SBA
ES-436	0.0084	180	R4SBA
ES-437	0.0153	491	R4SBA
ES-438	0.0398	844	R4SBA
ES-439	0.0079	344	R4SBA
ES-440	0.0029	97	R4SBA
ES-441	0.0064	277	R4SBA
ES-442	0.0230	620	R4SBA
ES-444	0.0207	410	R4SBA
ES-445	0.0015	64	R4SBA
ES-446	0.0014	63	R4SBA
ES-447	0.0001	6	R4SBA
ES-448	0.0015	67	R4SBA
ES-449	0.0020	59	R4SBA
ES-450	0.0013	58	R4SBA
ES-451	0.0014	60	R4SBA
ES-452	0.0013	56	R4SBA
ES-453	0.0038	40	R4SBA
ES-454	0.0076	36	R4SBA
ES-455	0.0014	41	R4SBA
ES-456	0.0026	74	R4SBA
ES-457	0.0043	62	R4SBA
ES-458	0.0159	72	R4SBA
ES-459	0.0097	63	R4SBA
ES-460	0.0040	42	R4SBA
ES-461	0.0071	50	R4SBA
ES-462	0.0433	731	R4SBA
ES-463	0.0029	124	R4SBA
ES-464	0.0314	455	R4SBA
ES-465	0.0024	90	R4SBA
ES-466	0.0474	1,033	R4SBA
ES-468	0.0655	1,030	R4SBA
ES-469	0.0078	112	R4SBA
ES-470	0.2537	1,502	R4SBA
ES-471	0.1382	854	R4SBA
ES-472	0.0031	67	R4SBA
ES-473	0.0414	293	R4SBA
ES-475	0.0127	551	R4SBA
ES-476	0.1263	876	R4SBA
ES-478	0.3818	2,638	R4SBA
ES-479	0.2921	3,573	R4SBA
ES-480	0.0996	1,086	R4SBA
ES-481	0.0024	90	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-482	0.0150	84	R4SBA
ES-483	0.0254	548	R4SBA
ES-484	0.0784	1,137	R4SBA
ES-485	0.0079	160	R4SBA
ES-486	0.0915	1,632	R4SBA
ES-488	0.0035	151	R4SBA
ES-489	0.0052	219	R4SBA
ES-490	0.0046	198	R4SBA
ES-491	0.1227	1,109	R4SBA
ES-492	0.1492	1,393	R4SBA
ES-493	0.0330	780	R4SBA
ES-496	0.1469	1,871	R4SBA
ES-497	0.0593	844	R4SBA
ES-499	0.0025	54	R4SBA
ES-500	0.0171	248	R4SBA
ES-501	0.0041	43	R4SBA
ES-502	0.0745	1,245	R4SBA
ES-503	0.0222	482	R4SBA
ES-504	0.0227	326	R4SBA
ES-505	0.0201	425	R4SBA
ES-506	0.0021	89	R4SBA
ES-507	0.0087	69	R4SBA
ES-508	0.0093	63	R4SBA
ES-509	0.0120	136	R4SBA
ES-510	0.0105	296	R4SBA
ES-511	0.0313	333	R4SBA
ES-512	0.0389	336	R4SBA
ES-513	0.0402	688	R4SBA
ES-514	0.0242	304	R4SBA
ES-515	0.0123	268	R4SBA
ES-516	0.0025	109	R4SBA
ES-517	0.0067	195	R4SBA
ES-518	0.0307	667	R4SBA
ES-519	0.0018	77	R4SBA
ES-520	0.0025	107	R4SBA
ES-521	0.0117	284	R4SBA
ES-522	0.0060	129	R4SBA
ES-523	0.0077	333	R4SBA
ES-524	0.0016	70	R4SBA
ES-525	0.0511	800	R4SBA
ES-526	0.1941	1,327	R4SBA
ES-527	0.0072	305	R4SBA
ES-528	0.0152	220	R4SBA
ES-529	0.1010	521	R4SBA
ES-530	0.0456	660	R4SBA
ES-531	0.0228	325	R4SBA
ES-532	0.0142	205	R4SBA
ES-533	0.2710	944	R4SBA
ES-535	0.0103	336	R4SBA
ES-536	0.0098	426	R4SBA
ES-537	0.1859	1,657	R4SBA
ES-538	0.0035	51	R4SBA
ES-539	0.0029	42	R4SBA
ES-540	0.0109	158	R4SBA
ES-541	0.0057	79	R4SBA
ES-542	0.0070	281	R4SBA
ES-543	0.2117	2,331	R4SBA
ES-544	0.0130	566	R4SBA
ES-545	0.0870	631	R4SBA
ES-546	0.0305	443	R4SBA
ES-547	0.0045	64	R4SBA
ES-548	0.0679	984	R4SBA
ES-549	0.0023	93	R4SBA
ES-550	0.0545	555	R4SBA
ES-551	0.0095	413	R4SBA
ES-552	0.0079	172	R4SBA
ES-553	0.0012	53	R4SBA
ES-554	0.0039	59	R4SBA
ES-555	0.0252	368	R4SBA
ES-556	0.0092	133	R4SBA
ES-557	0.1538	2,213	R4SBA
ES-558	0.0061	129	R4SBA
ES-559	0.0141	204	R4SBA
ES-560	0.0272	297	R4SBA
ES-561	0.0355	385	R4SBA
ES-562	0.0051	220	R4SBA
ES-563	0.0100	216	R4SBA
ES-564	0.0339	1,396	R4SBA
ES-565	0.0009	39	R4SBA
ES-566	0.0039	164	R4SBA
ES-567	0.0022	97	R4SBA
ES-568	0.0235	1,018	R4SBA
ES-569	0.0020	87	R4SBA
ES-570	0.0340	664	R4SBA
ES-571	0.0125	540	R4SBA
ES-572	0.0117	339	R4SBA
ES-573	0.0181	786	R4SBA
ES-574	0.0349	395	R4SBA
ES-575	0.0029	58	R4SBA
ES-576	0.0110	472	R4SBA
ES-577	0.0032	90	R4SBA
ES-578	0.0018	77	R4SBA
ES-579	0.0311	337	R4SBA
ES-580	0.0293	320	R4SBA
ES-581	0.0190	408	R4SBA
ES-582	0.1500	1,087	R4SBA
ES-583	0.0441	386	R4SBA
ES-584	0.0678	736	R4SBA
ES-585	0.0079	165	R4SBA
ES-586	0.0017	45	R4SBA
ES-587	0.0761	851	R4SBA
ES-588	0.0010	22	R4SBA
ES-589	0.0046	52	R4SBA
ES-590	0.0078	91	R4SBA
ES-591	0.0170	268	R4SBA
ES-592	0.0012	26	R4SBA
ES-593	0.0067	145	R4SBA
ES-594	0.0226	387	R4SBA
ES-595	0.0043	183	R4SBA
ES-596	0.0493	953	R4SBA
ES-597	0.0165	354	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-598	0.0032	134	R4SBA
ES-599	0.0234	338	R4SBA
ES-600	0.0439	950	R4SBA
ES-601	0.0041	173	R4SBA
ES-602	0.0207	299	R4SBA
ES-603	0.0009	35	R4SBA
ES-604	0.0572	574	R4SBA
ES-605	0.0174	188	R4SBA
ES-606	0.0064	272	R4SBA
ES-608	0.0101	214	R4SBA
ES-609	0.0027	58	R4SBA
ES-610	0.0273	595	R4SBA
ES-612	0.0327	773	R4SBA
ES-613	0.0093	195	R4SBA
ES-614	0.0021	46	R4SBA
ES-615	0.0021	46	R4SBA
ES-616	0.0289	314	R4SBA
ES-617	0.1217	2,029	R4SBA
ES-618	0.0430	930	R4SBA
ES-619	0.0100	433	R4SBA
ES-620	0.0045	184	R4SBA
ES-621	0.0293	708	R4SBA
ES-622	0.0069	247	R4SBA
ES-623	0.0050	220	R4SBA
ES-624	0.0128	138	R4SBA
ES-625	0.0250	176	R4SBA
ES-626	0.0099	211	R4SBA
ES-627	0.0799	398	R4SBA
ES-628	0.0016	70	R4SBA
ES-629	0.0019	69	R4SBA
ES-630	0.0029	71	R4SBA
ES-631	0.0134	94	R4SBA
ES-632	0.0459	904	R4SBA
ES-635	0.0030	129	R4SBA
ES-637	0.0134	192	R4SBA
ES-638	0.0141	204	R4SBA
ES-639	0.0507	953	R4SBA
ES-640	0.0115	487	R4SBA
ES-641	0.0281	609	R4SBA
ES-642	0.0052	122	R4SBA
ES-643	0.0028	40	R4SBA
ES-644	0.0034	143	R4SBA
ES-645	0.0035	74	R4SBA
ES-646	0.0572	829	R4SBA
ES-647	0.0022	96	R4SBA
ES-648	0.0016	142	R4SBA
ES-649	0.0054	26	R4SBA
ES-650	0.0090	130	R4SBA
ES-651	0.0258	561	R4SBA
ES-652	0.0082	235	R4SBA
ES-653	0.0007	27	R4SBA
ES-654	0.0015	63	R4SBA
ES-655	0.0003	9	R4SBA
ES-656	0.0027	118	R4SBA
ES-657	0.0081	175	R4SBA
ES-658	0.0026	72	R4SBA
ES-659	0.0087	189	R4SBA
ES-660	0.0156	305	R4SBA
ES-661	0.0125	178	R4SBA
ES-662	0.0050	217	R4SBA
ES-663	0.0889	966	R4SBA
ES-664	0.0449	649	R4SBA
ES-665	0.0097	396	R4SBA
ES-666	0.0012	51	R4SBA
ES-667	0.0067	291	R4SBA
ES-668	0.0049	70	R4SBA
ES-669	0.0019	83	R4SBA
ES-670	0.1443	1,406	R4SBA
ES-671	0.0693	374	R4SBA
ES-672	0.0219	417	R4SBA
ES-673	0.0180	392	R4SBA
ES-674	0.0023	48	R4SBA
ES-675	0.0053	114	R4SBA
ES-676	0.0017	72	R4SBA
ES-677	0.0083	89	R4SBA
ES-678	0.0045	66	R4SBA
ES-679	0.0042	62	R4SBA
ES-680	0.0075	115	R4SBA
ES-681	0.0072	81	R4SBA
ES-682	0.0032	73	R4SBA
ES-683	0.0084	110	R4SBA
ES-684	0.0096	104	R4SBA
ES-685	0.0174	126	R4SBA
ES-686	0.0155	112	R4SBA
ES-687	0.0067	96	R4SBA
ES-688	0.0101	72	R4SBA
ES-689	0.0023	38	R4SBA
ES-690	0.0135	198	R4SBA
ES-691	0.0174	252	R4SBA
ES-692	0.0047	206	R4SBA
ES-693	0.0226	385	R4SBA
ES-694	0.0136	197	R4SBA
ES-695	0.0150	650	R4SBA
ES-696	0.0042	182	R4SBA
ES-697	0.0056	242	R4SBA
ES-698	0.0006	24	R4SBA
ES-699	0.0098	428	R4SBA
ES-700	0.0020	82	R4SBA
ES-701	0.0092	133	R4SBA
ES-702	0.0023	35	R4SBA
ES-703	0.0336	726	R4SBA
ES-704	0.0104	37	R4SBA
ES-705	0.0789	350	R4SBA
ES-706	0.0051	229	R4SBA
ES-707	0.0405	535	R4SBA
ES-708	0.0083	122	R4SBA
ES-709	0.0087	193	R4SBA
ES-710	0.0097	147	R4SBA
ES-711	0.0057	129	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-712	0.0631	723	R4SBA
ES-713	0.0156	297	R4SBA
ES-714	0.0494	380	R4SBA
ES-715	0.0296	429	R4SBA
ES-716	0.1467	1,951	R4SBA
ES-717	0.1422	1,420	R4SBA
ES-718	0.0464	542	R4SBA
ES-719	0.0355	677	R4SBA
ES-720	0.0068	147	R4SBA
ES-721	0.0063	270	R4SBA
ES-722	0.0195	283	R4SBA
ES-723	0.0329	657	R4SBA
ES-724	0.0011	46	R4SBA
ES-725	0.0391	788	R4SBA
ES-726	0.0705	1,438	R4SBA
ES-727	0.0286	620	R4SBA
ES-728	0.0117	253	R4SBA
ES-729	0.1031	735	R4SBA
ES-730	0.0885	1,034	R4SBA
ES-731	0.0299	517	R4SBA
ES-732	0.0029	119	R4SBA
ES-733	0.0255	284	R4SBA
ES-734	0.0047	201	R4SBA
ES-735	0.0048	205	R4SBA
ES-736	0.0009	37	R4SBA
ES-737	0.0065	283	R4SBA
ES-738	0.0039	172	R4SBA
ES-739	0.0262	568	R4SBA
ES-740	0.0032	145	R4SBA
ES-741	0.0650	1,134	R4SBA
ES-742	0.0087	376	R4SBA
ES-743	0.0164	487	R4SBA
ES-744	0.0017	75	R4SBA
ES-745	0.0141	277	R4SBA
ES-746	0.0018	80	R4SBA
ES-747	0.0017	70	R4SBA
ES-748	0.3835	2,794	R4SBA
ES-749	0.0122	130	R4SBA
ES-750	0.0499	559	R4SBA
ES-751	0.0052	75	R4SBA
ES-752	0.0069	150	R4SBA
ES-753	0.0046	99	R4SBA
ES-754	0.0034	139	R4SBA
ES-755	0.0054	102	R4SBA
ES-756	0.0014	60	R4SBA
ES-757	0.0089	75	R4SBA
ES-758	0.0645	346	R4SBA
ES-759	0.0119	163	R4SBA
ES-760	0.0512	444	R4SBA
ES-761	0.0376	429	R4SBA
ES-762	0.0229	498	R4SBA
ES-763	0.0141	304	R4SBA
ES-764	0.0028	120	R4SBA
ES-765	0.0051	223	R4SBA
ES-766	0.0020	86	R4SBA
ES-767	0.0090	130	R4SBA
ES-768	0.0046	100	R4SBA
ES-769	0.0074	81	R4SBA
ES-770	0.0078	167	R4SBA
ES-771	0.0012	50	R4SBA
ES-772	0.0141	243	R4SBA
ES-773	0.0029	124	R4SBA
ES-774	0.0230	334	R4SBA
ES-775	0.0016	69	R4SBA
ES-776	0.0029	59	R4SBA
ES-777	0.0151	319	R4SBA
ES-778	0.0049	213	R4SBA
ES-779	0.0041	177	R4SBA
ES-780	0.0017	37	R4SBA
ES-781	0.0066	143	R4SBA
ES-782	0.0172	377	R4SBA
ES-783	0.0024	52	R4SBA
ES-784	0.0026	56	R4SBA
ES-785	0.0003	6	R4SBA
ES-786	0.0021	45	R4SBA
ES-787	0.0036	78	R4SBA
ES-788	0.0032	136	R4SBA
ES-789	0.0011	47	R4SBA
ES-790	0.0012	53	R4SBA
ES-791	0.0010	45	R4SBA
ES-792	0.0110	242	R4SBA
ES-793	0.0028	122	R4SBA
ES-794	0.0016	69	R4SBA
ES-795	0.0012	51	R4SBA
ES-796	0.0026	115	R4SBA
ES-797	0.0040	57	R4SBA
ES-798	0.0032	45	R4SBA
ES-799	0.0008	33	R4SBA
ES-800	0.0122	88	R4SBA
ES-801	0.0009	19	R4SBA
ES-802	0.0066	95	R4SBA
ES-803	0.0007	30	R4SBA
ES-804	0.0010	27	R4SBA
ES-805	0.0190	275	R4SBA
ES-806	0.0012	24	R4SBA
ES-807	0.0015	11	R4SBA
ES-808	0.0005	22	R4SBA
ES-809	0.0006	8	R4SBA
ES-810	0.0016	23	R4SBA
ES-811	0.0016	22	R4SBA
ES-812	0.0057	60	R4SBA
ES-813	0.0011	8	R4SBA
ES-814	0.0013	55	R4SBA
ES-815	0.0025	72	R4SBA
ES-816	0.0015	20	R4SBA
ES-817	0.0054	114	R4SBA
ES-818	0.0056	120	R4SBA
ES-819	0.0015	20	R4SBA
ES-820	0.0165	248	R4SBA
ES-821	0.0052	227	R4SBA
ES-822	0.0022	97	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-823	0.0046	202	R4SBA
ES-824	0.0055	236	R4SBA
ES-825	0.0006	13	R4SBA
ES-826	0.0037	81	R4SBA
ES-827	0.0035	152	R4SBA
ES-828	0.0078	339	R4SBA
ES-829	0.0017	76	R4SBA
ES-830	0.0189	204	R4SBA
ES-831	0.0058	126	R4SBA
ES-832	0.0070	76	R4SBA
ES-833	0.0073	212	R4SBA
ES-834	0.0037	157	R4SBA
ES-835	0.0037	157	R4SBA
ES-836	0.0015	64	R4SBA
ES-837	0.0097	210	R4SBA
ES-838	0.0642	310	R4SBA
ES-839	0.2080	481	R4SBA
ES-840	0.0540	1175	R4SBA
ES-841	0.0020	86	R4SBA
ES-842	0.0051	217	R4SBA
ES-843	0.0016	35	R4SBA
ES-844	0.0186	480	R4SBA
ES-845	0.0100	217	R4SBA
ES-846	0.0004	16	R4SBA
ES-847	0.0005	21	R4SBA
ES-848	0.0008	33	R4SBA
ES-849	0.0007	15	R4SBA
ES-850	0.0003	14	R4SBA
ES-852	0.0451	654	R4SBA
ES-853	0.0014	30	R4SBA
ES-854	0.0059	126	R4SBA
ES-855	0.0048	210	R4SBA
ES-856	0.0006	25	R4SBA
ES-857	0.0007	30	R4SBA
ES-858	0.0117	509	R4SBA
ES-859	0.0025	110	R4SBA
ES-860	0.0315	342	R4SBA
ES-861	0.0116	254	R4SBA
ES-862	0.0077	116	R4SBA
ES-863	0.0014	62	R4SBA
ES-864	0.0089	100	R4SBA
ES-865	0.0067	102	R4SBA
ES-866	0.0063	271	R4SBA
ES-867	0.0758	792	R4SBA
ES-868	0.0011	49	R4SBA
ES-869	0.0997	987	R4SBA
ES-870	0.0154	223	R4SBA
ES-871	0.0093	136	R4SBA
ES-872	0.0086	160	R4SBA
ES-873	0.0024	104	R4SBA
ES-874	0.0116	251	R4SBA
ES-875	0.0255	551	R4SBA
ES-876	0.0032	141	R4SBA
ES-877	0.0071	151	R4SBA
ES-878	0.0029	123	R4SBA
ES-879	0.0017	69	R4SBA
ES-880	0.0063	277	R4SBA
ES-881	0.0029	127	R4SBA
ES-882	0.0079	346	R4SBA
ES-883	0.0063	274	R4SBA
ES-884	0.0006	7	R4SBA
ES-885	0.0005	23	R4SBA
ES-886	0.0121	350	R4SBA
ES-887	0.0035	23	R4SBA
ES-888	0.0036	16	R4SBA
ES-889	0.0122	132	R4SBA
ES-890	0.0015	66	R4SBA
ES-891	0.0049	70	R4SBA
ES-892	0.0022	95	R4SBA
ES-893	0.0039	172	R4SBA
ES-894	0.0079	342	R4SBA
ES-895	0.0038	125	R4SBA
ES-896	0.0095	413	R4SBA
ES-897	0.0105	228	R4SBA
ES-898	0.0019	41	R4SBA
ES-899	0.0065	283	R4SBA
ES-900	0.0041	175	R4SBA
ES-901	0.0093	405	R4SBA
ES-902	0.0012	53	R4SBA
ES-903	0.0066	287	R4SBA
ES-904	0.0002	10	R4SBA
ES-905	0.0002	7	R4SBA
ES-906	0.0057	245	R4SBA
ES-907	0.0167	362	R4SBA
ES-910	0.0045	194	R4SBA
ES-911	0.0014	123	R4SBA
ES-912	0.0014	119	R4SBA
ES-913	0.0050	72	R4SBA
ES-914	0.0005	22	R4SBA
ES-915	0.0114	247	R4SBA
ES-916	0.0056	119	R4SBA
ES-917	0.0027	118	R4SBA
ES-918	0.0007	31	R4SBA
ES-919	0.0189	44	R4SBA
ES-920	0.0027	59	R4SBA
ES-921	0.0021	92	R4SBA
ES-922	0.0052	76	R4SBA
ES-923	0.0034	75	R4SBA
ES-924	0.0018	78	R4SBA
ES-925	0.0011	47	R4SBA
ES-926	0.0035	77	R4SBA
ES-927	0.0011	48	R4SBA
ES-928	0.0007	30	R4SBA
ES-929	0.0065	142	R4SBA
ES-930	0.0011	51	R4SBA
ES-931	0.0037	80	R4SBA
ES-932	0.0019	82	R4SBA
ES-933	0.0027	77	R4SBA

ID	Acre(s)	Linear Ft	Cowardin Code
ES-934	0.0070	103	R4SBA
ES-935	0.0069	75	R4SBA
ES-936	0.0089	193	R4SBA
ES-937	0.0052	112	R4SBA
ES-938	0.0014	59	R4SBA
ES-939	0.0015	63	R4SBA
ES-940	0.0036	79	R4SBA
ES-941	0.0113	82	R4SBA
ES-942	0.0141	77	R4SBA
ES-943	0.0021	91	R4SBA
ES-944	0.0007	29	R4SBA
ES-945	0.0018	77	R4SBA
ES-946	0.0070	76	R4SBA
ES-947	0.0007	36	R4SBA
ES-948	0.0095	71	R4SBC
ES-949	0.0182	397	R4SBA
ES-950	0.0006	51	R4SBA
ES-951	0.0074	164	R4SBA
ES-952	0.0022	99	R4SBA
ES-953	0.0037	161	R4SBA
ES-954	0.0106	117	R4SBA
ES-955	0.0046	200	R4SBA
ES-956	0.0023	99	R4SBA
ES-957	0.0024	24	R4SBA
ES-958	0.0003	16	R4SBA
ES-959	0.0007	30	R4SBA
ES-960	0.0006	24	R4SBA
ES-961	0.0036	51	R4SBA
ES-962	0.0007	29	R4SBA
ES-963	0.0001	6	R4SBA
Intermittent Stream:			
IS-1	3.4071	9,058	R4SBC
IS-2	0.6816	2,426	R4SBC
IS-5	0.1196	348	R4SBC
IS-6	0.2235	1,866	R4SBC
IS-8	0.0186	131	R4SBC
IS-9	0.1407	2,097	R4SBC
IS-11	0.4339	3,670	R4SBC
IS-12	0.0373	367	R4SBC
IS-13	0.0071	63	R4SBC
IS-14	0.3009	824	R4SBC
IS-15	0.6523	3,994	R4SBC
IS-16	0.0051	81	R4SBC
IS-17	0.2211	1,435	R4SBC
IS-18	0.2865	720	R4SBC
IS-19	1.6962	5,098	R4SBC
IS-20	0.3359	1,784	R4SBC
IS-21	0.1337	330	R4SBC
IS-22	0.0388	212	R4SBC
IS-23	0.1268	949	R4SBC
IS-24	0.0758	548	R4SBC
IS-25	0.2821	1,302	R4SBC
IS-26	0.1328	729	R4SBC
IS-27	0.1678	557	R4SBC
IS-28	0.1038	337	R4SBC
IS-30	0.1220	654	R4SBC
IS-31	0.3550	1,394	R4SBC
IS-32	0.1188	531	R4SBC
IS-33	0.4367	2,561	R4SBC
IS-34	0.1058	1,238	R4SBC
IS-35	0.0328	168	R4SBC
IS-36	0.2110	1,674	R4SBC
IS-37	0.2017	1,183	R4SBC
IS-38	0.4912	2,361	R4SBC
IS-39	0.5487	4,021	R4SBC
IS-40	0.2241	1,140	R4SBC
IS-41	0.4837	3,320	R4SBC
IS-42	0.0257	75	R4SBC
IS-43	0.3206	1028	R4SBC
IS-44	0.2015	1097	R4SBC
IS-45	0.0044	18	R4SBC
IS-46	0.0048	18	R4SBC
IS-47	0.0111	30	R4SBC
IS-48	0.0773	172	R4SBC
IS-49	0.0533	89	R4SBC
IS-50	0.0047	23	R4SBC
IS-51	0.0170	74	R4SBC
Perennial Stream:			
PS-1	0.7732	736	R5UBF/H
PS-2	0.3803	271	R5UBF/H
PS-3	6.1676	5,419	R5UBF/H
PS-4	1.0140	232	R5UBF/H
PS-5	1.0489	885	R5UBF
PS-6	0.1250	360	R5UBF
PS-7	1.8350	2,204	R5UBF
PS-8	0.2018	941	R5UBF/H
PS-9	9.1809	8,167	R5UBF
PS-10	0.8811	3,182	R5UBF
PS-11	0.3518	470	R5UBF
PS-12	0.0323	41	R5UBF
PS-13	0.2482	580	R5UBF
PS-14	1.2496	2,223	R5UBF
PS-15	0.1416	328	R5UBF
Open Waters:			
OW-1	0.0033	n/a	PUBK
OW-2	4.5303	n/a	PUBK
OW-3	0.8052	n/a	PUBK
OW-4	0.3258	n/a	PUBK
OW-5	0.5091	n/a	PUBK
OW-6	1.5908	n/a	PUBK
OW-7	0.6628	n/a	PUBK
OW-8	0.1614	n/a	PUBK
OW-9	0.1811	n/a	PUBK
OW-10	0.0241	n/a	PUBK
OW-11	0.2719	n/a	PUBK
OW-12	1.6377	n/a	PUBK

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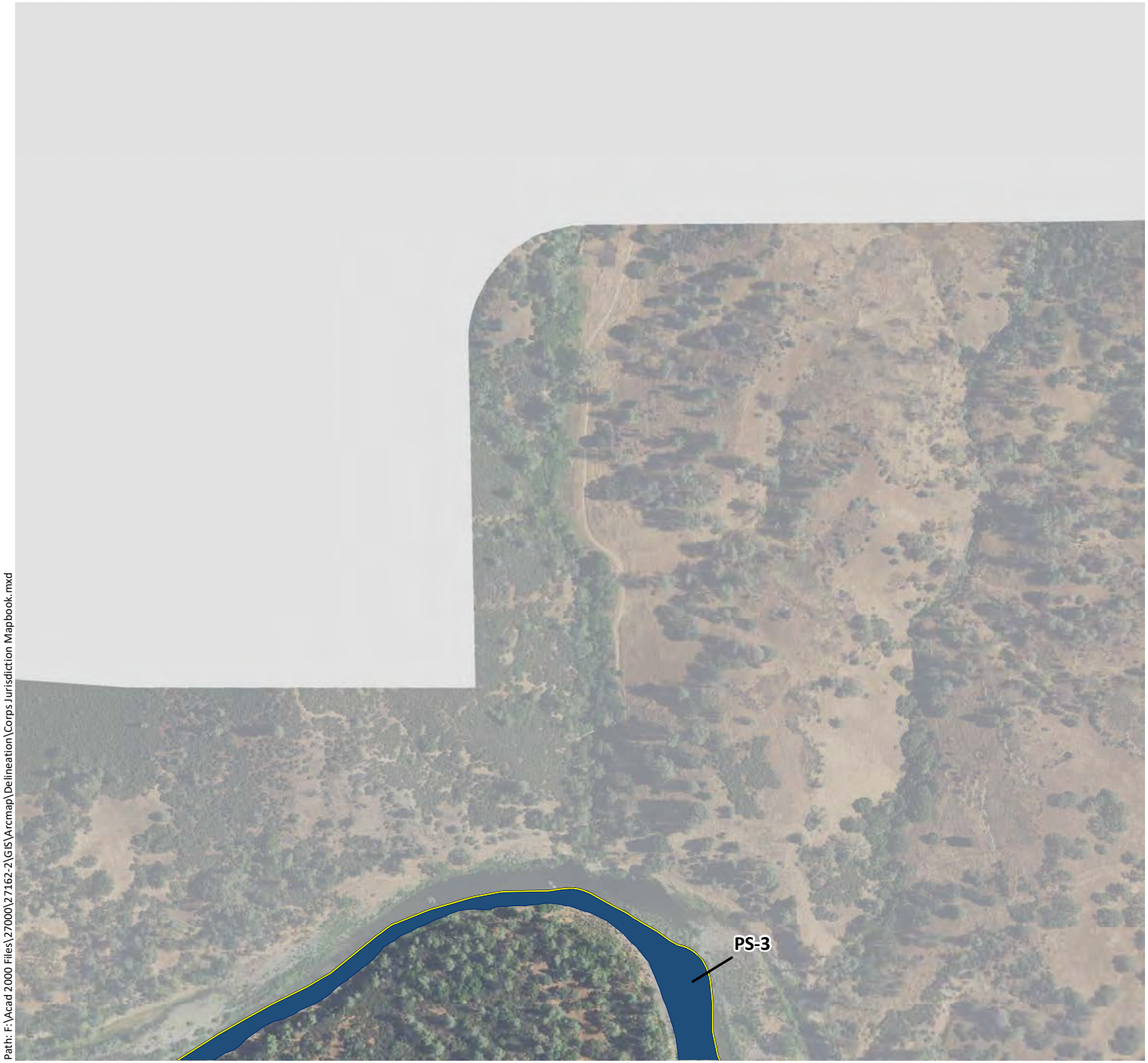
Sources:WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 1)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 2)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 3)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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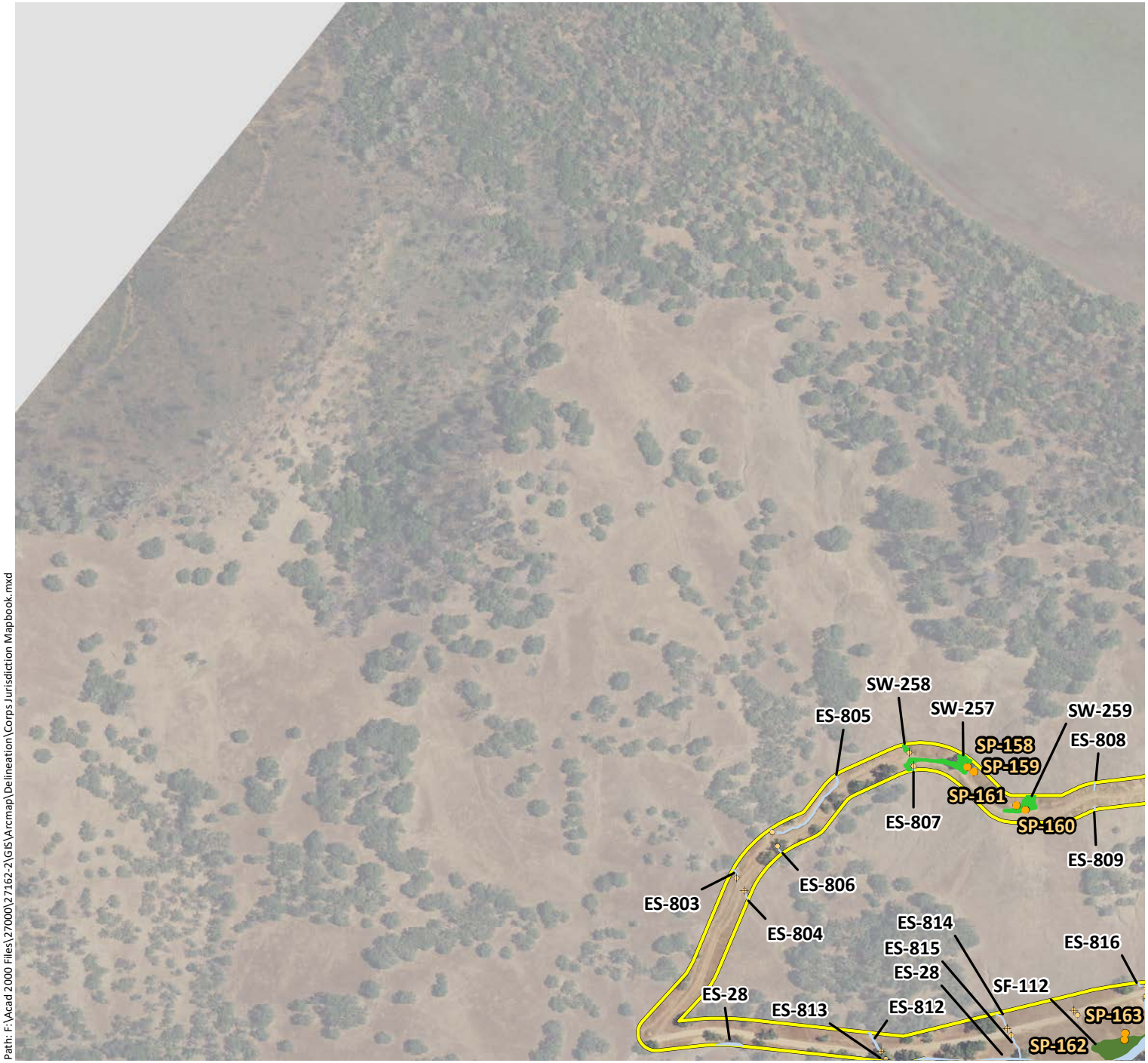
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 4)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 5)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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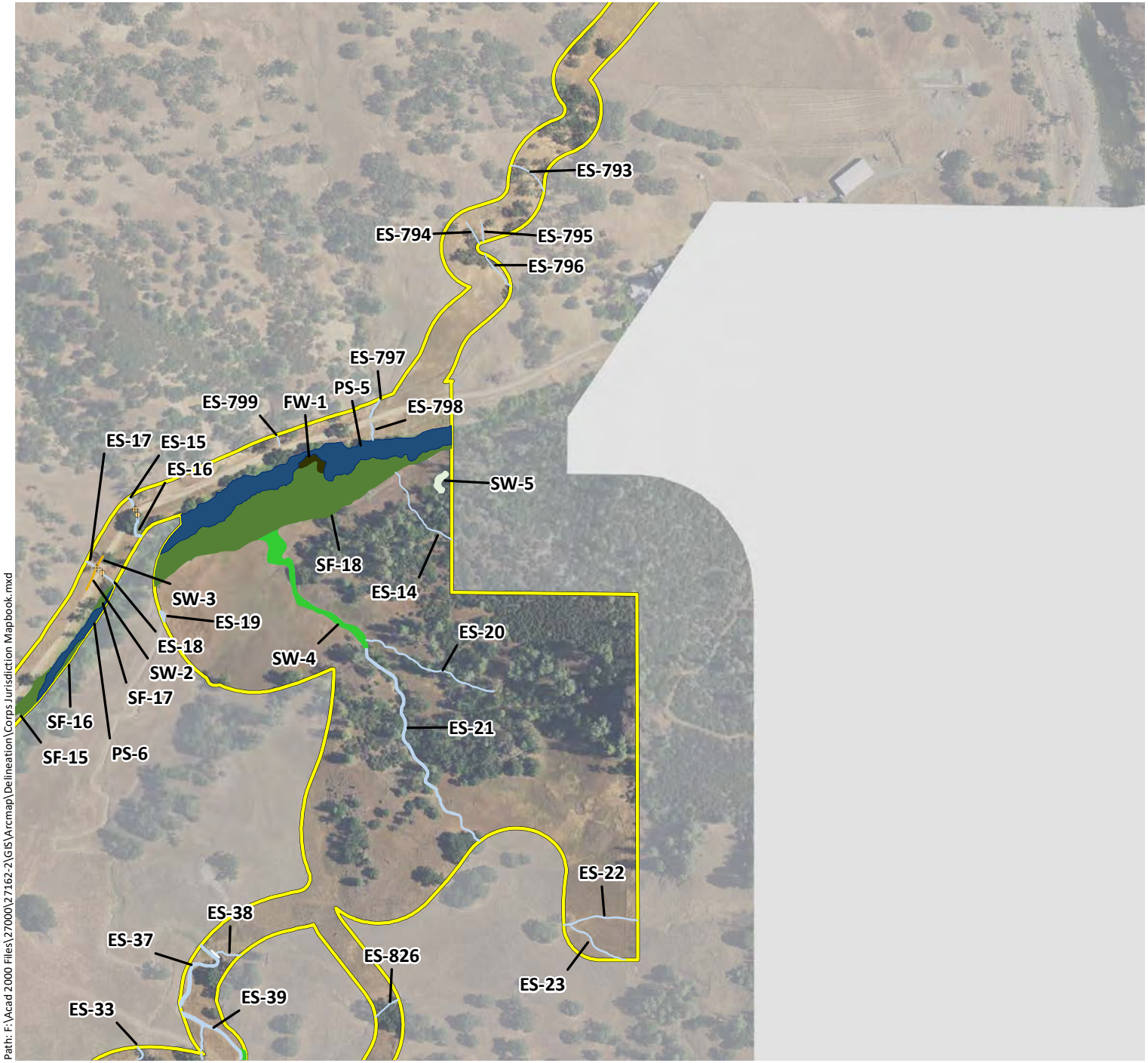
Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 6)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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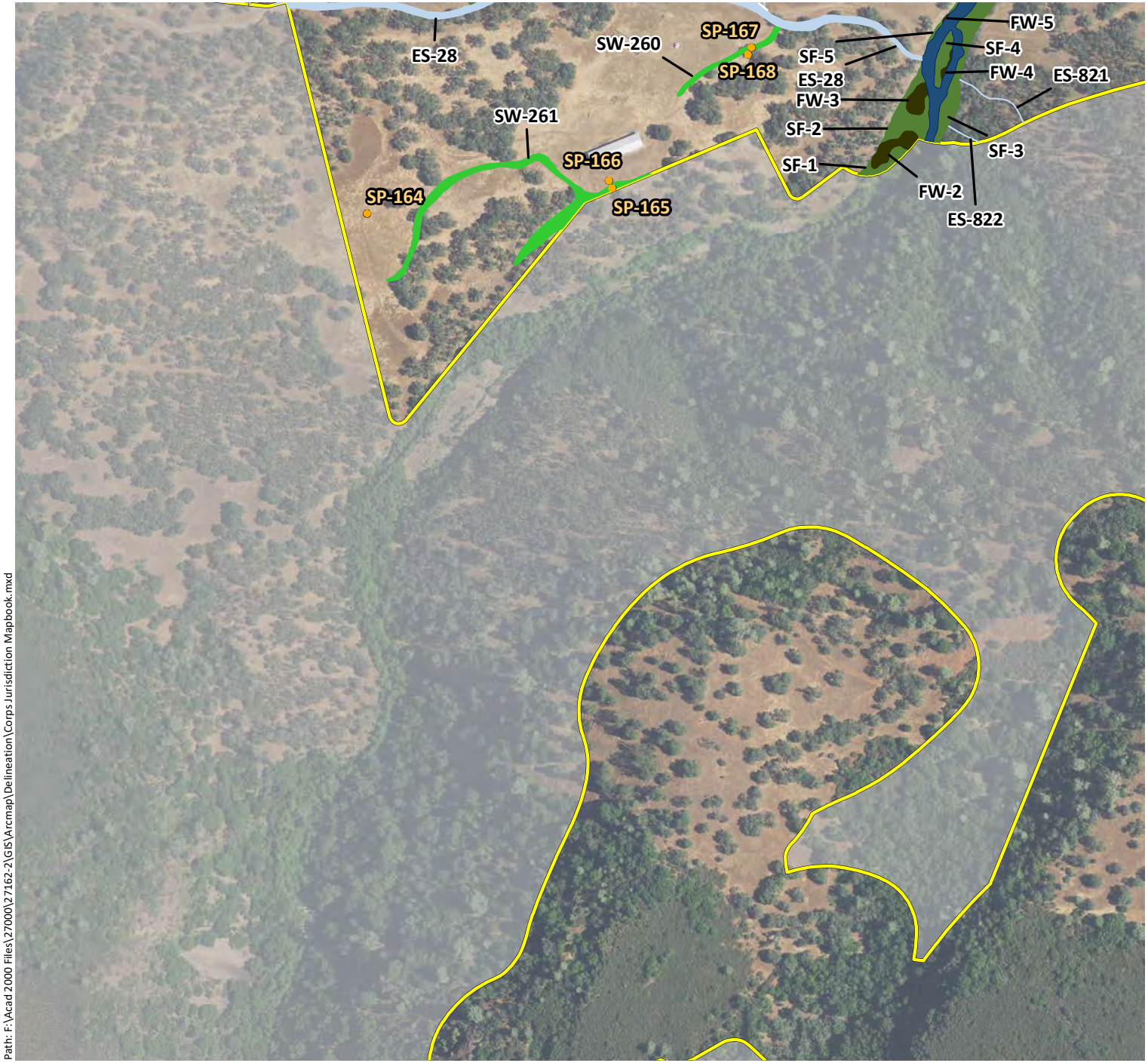
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 7)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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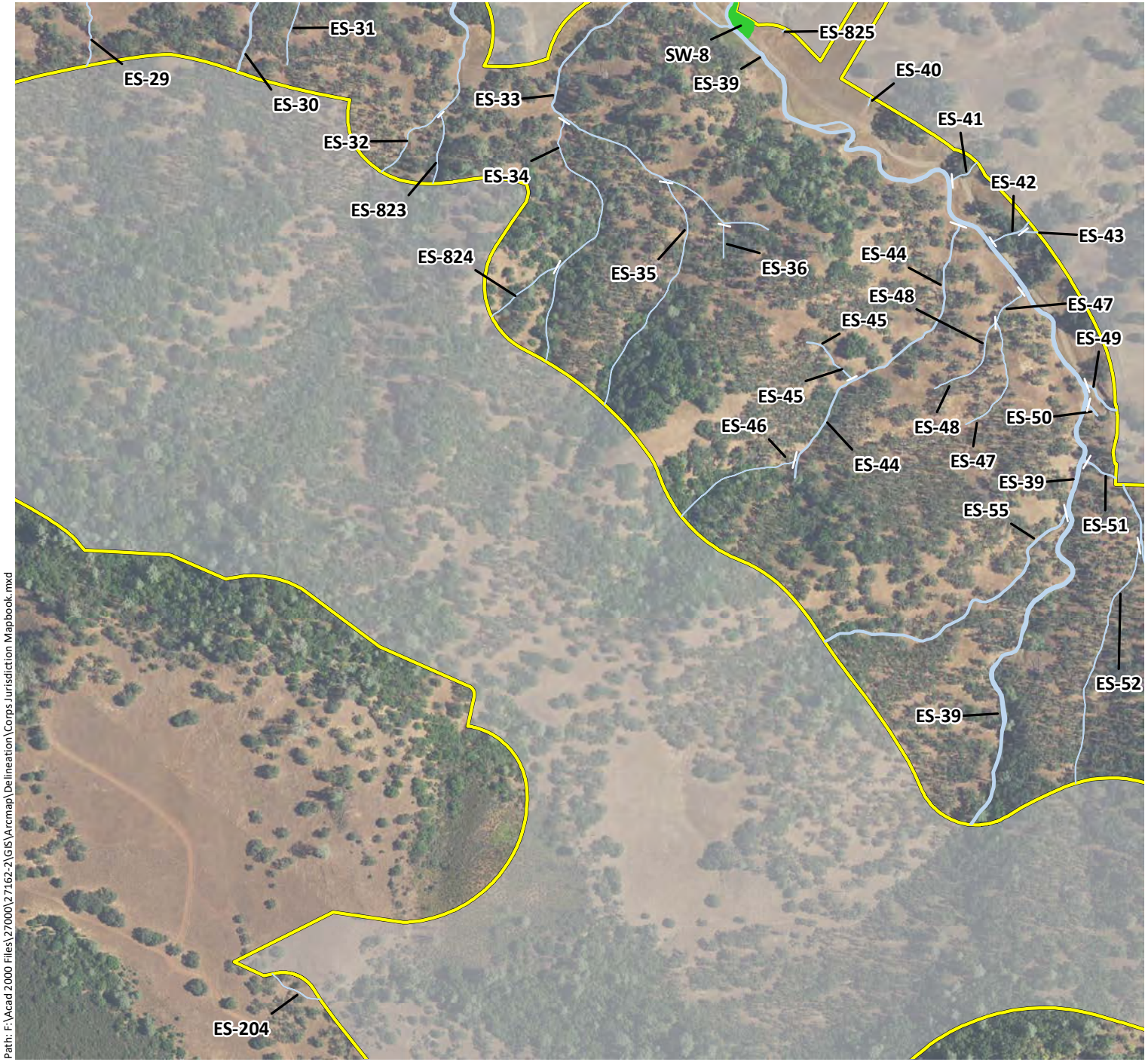
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 8)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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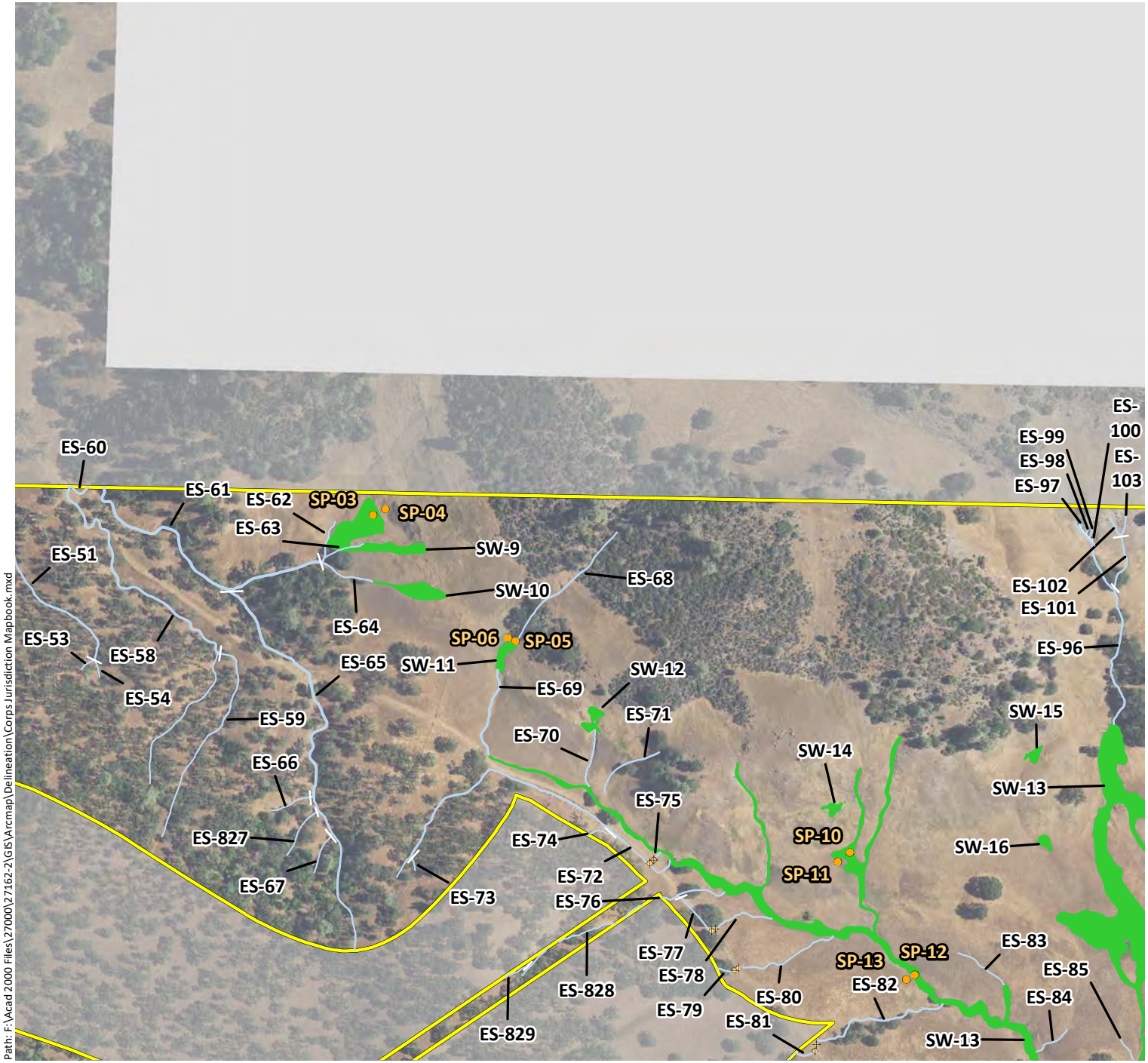
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 9)

Maha Resort and Guenoc Valley Development, Phase 1



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Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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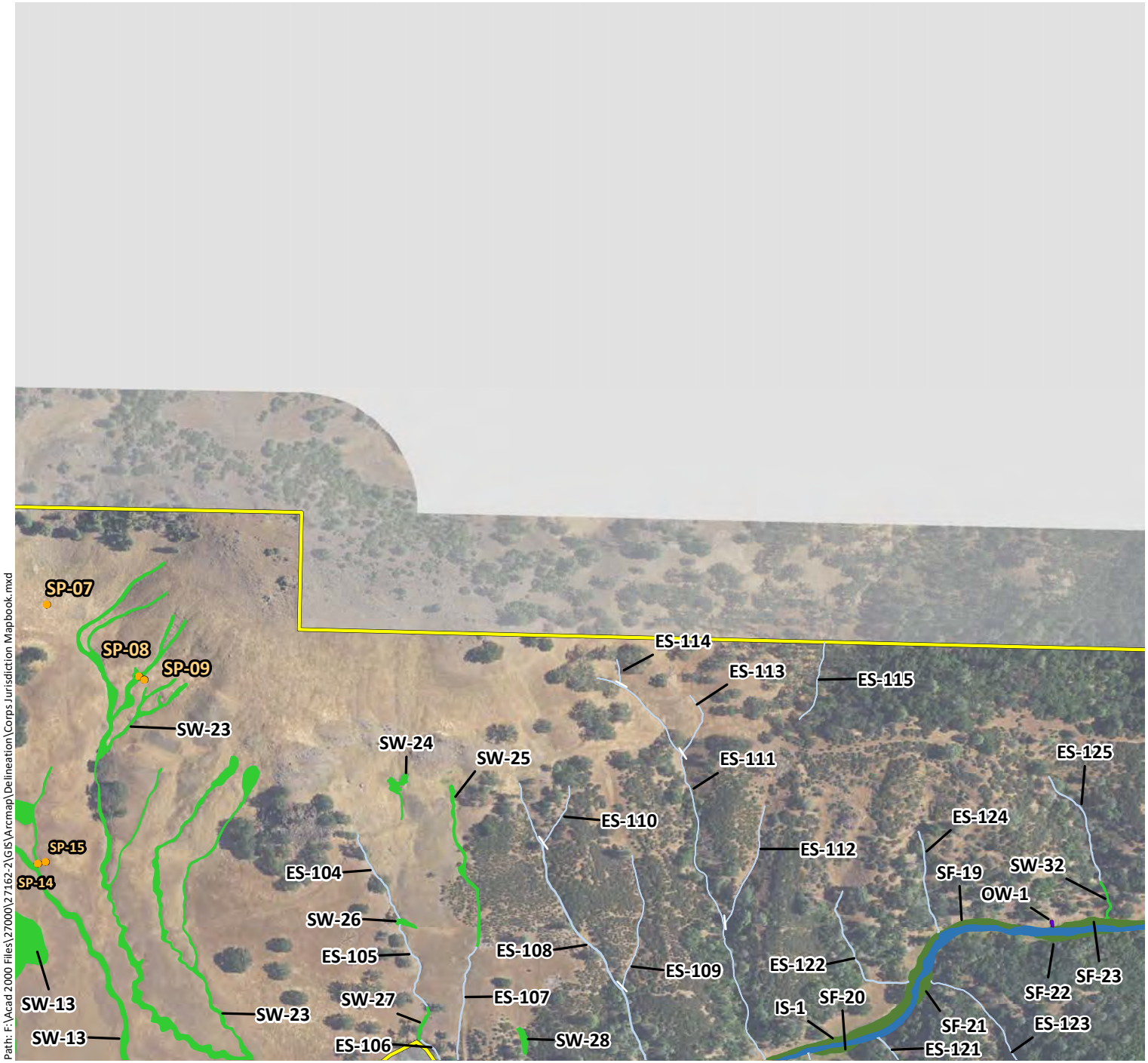
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 10)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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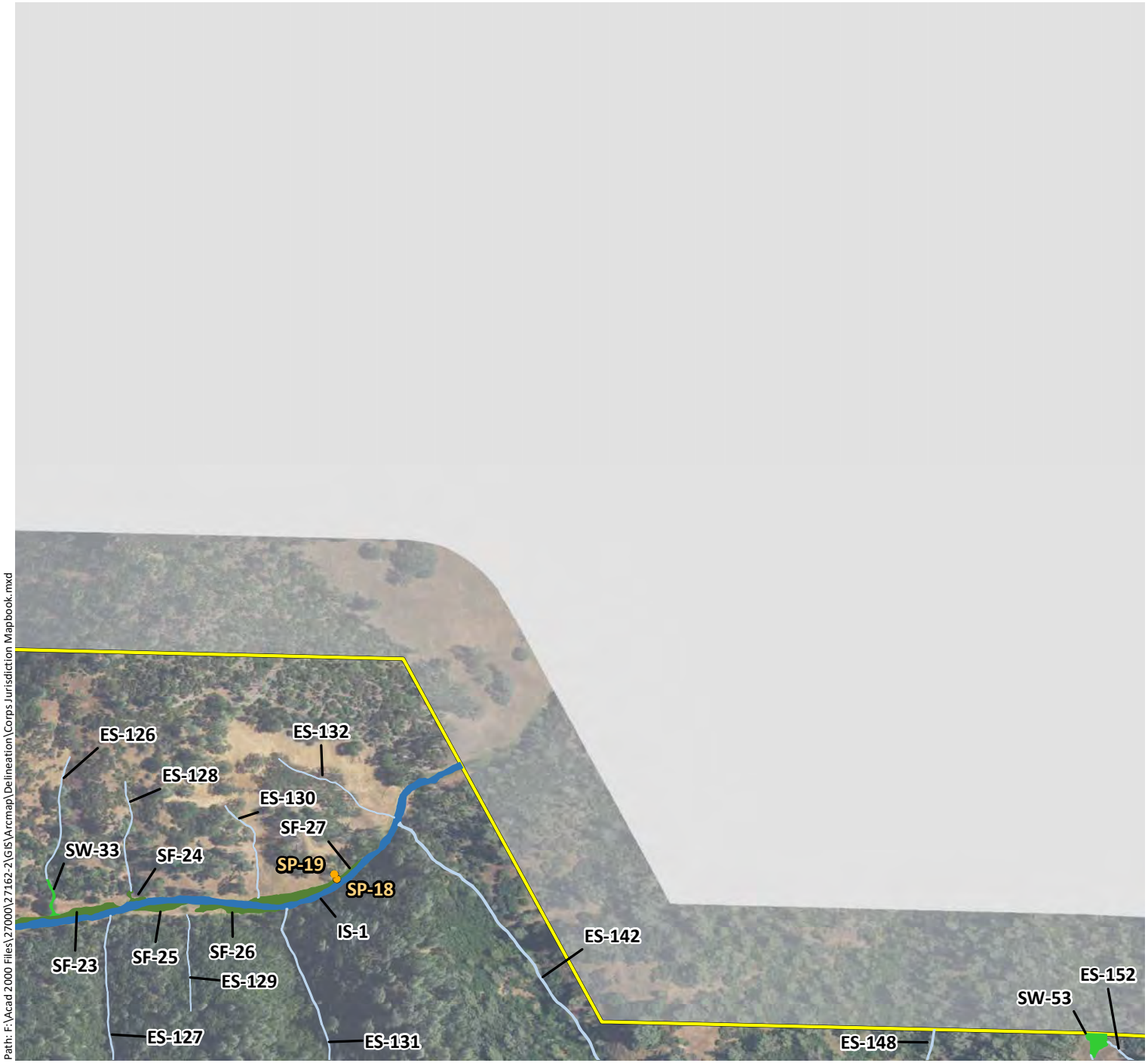
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 11)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 12)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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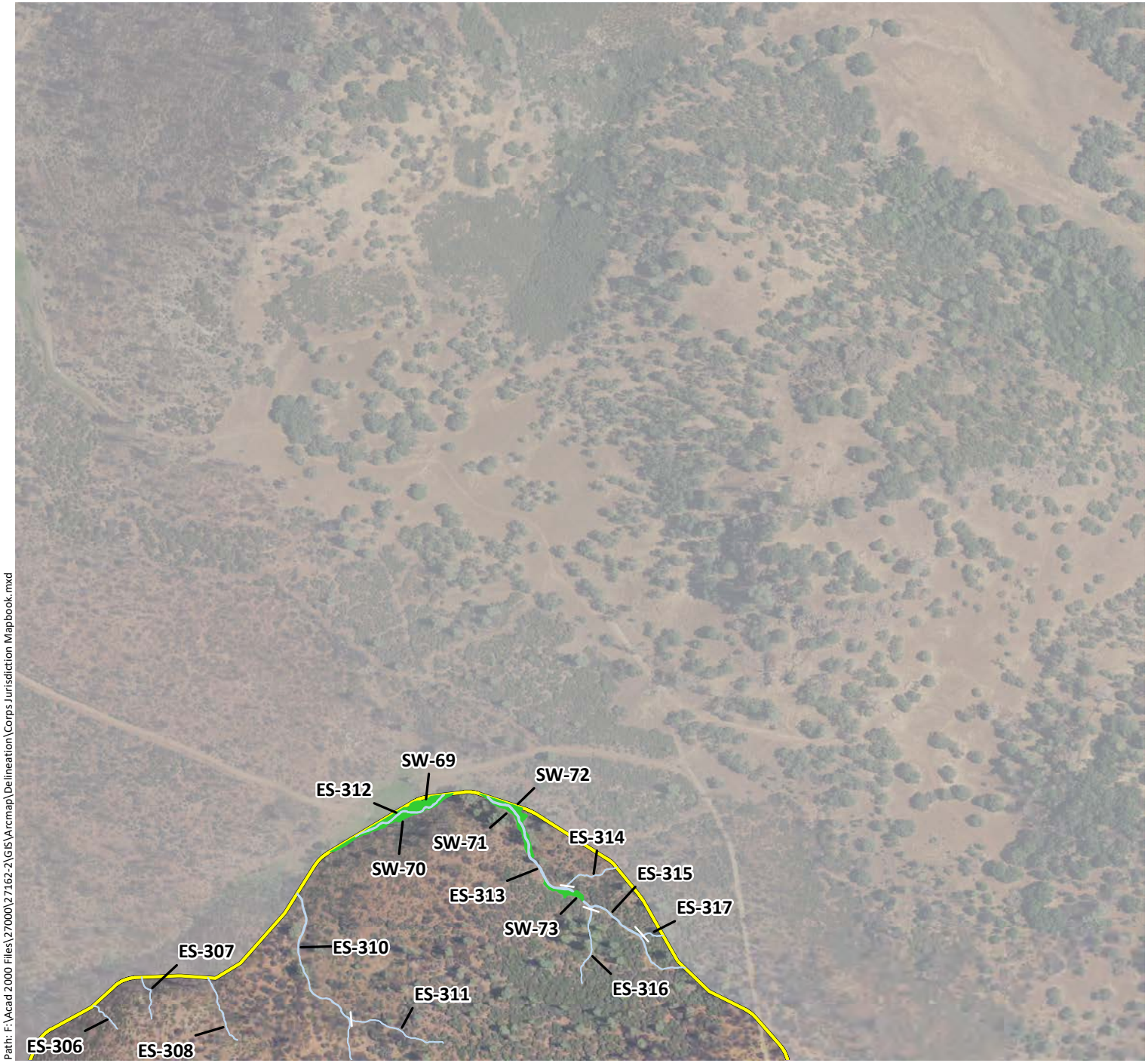
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 13)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 14)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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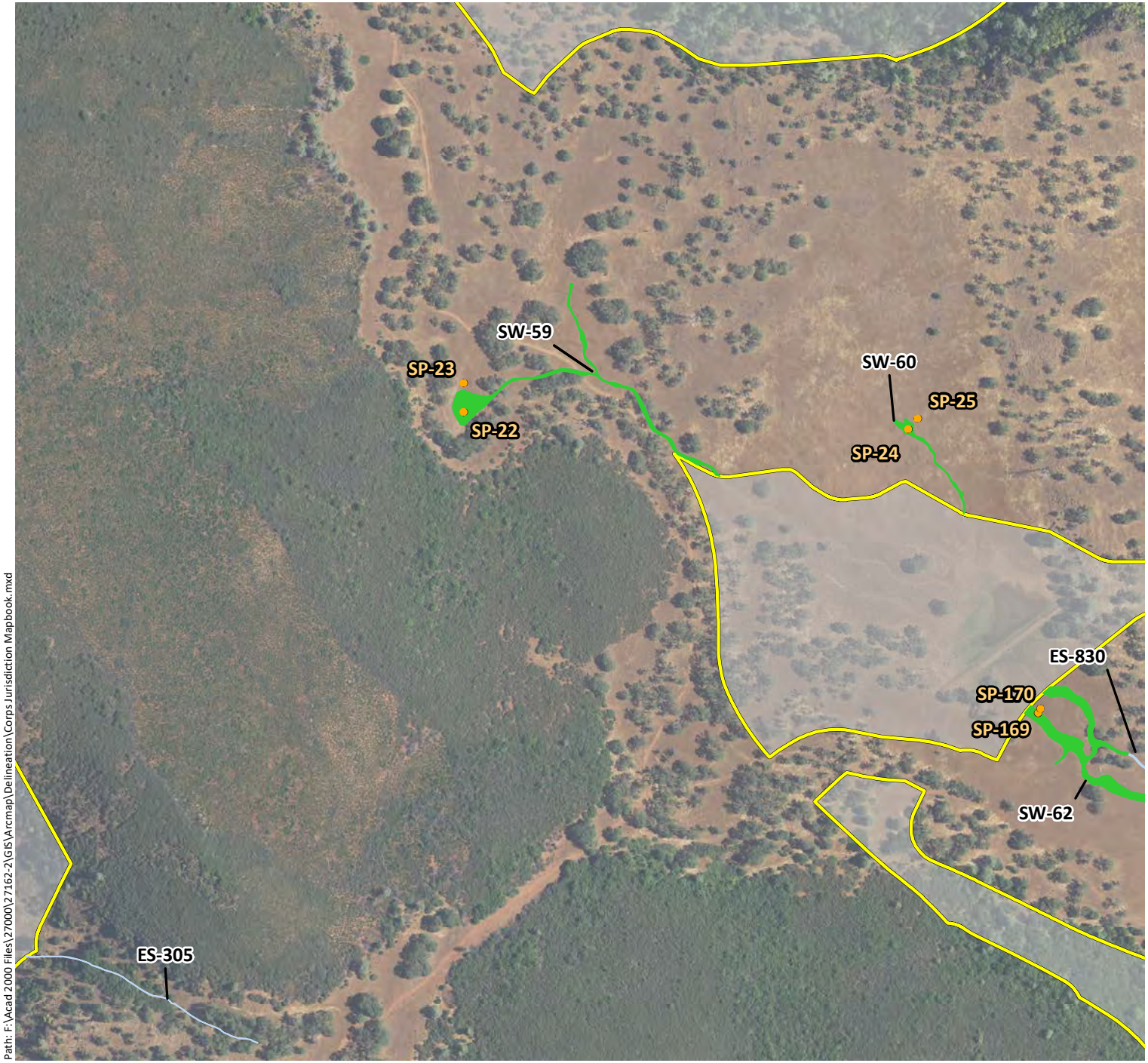
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 15)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.
Sample Points
Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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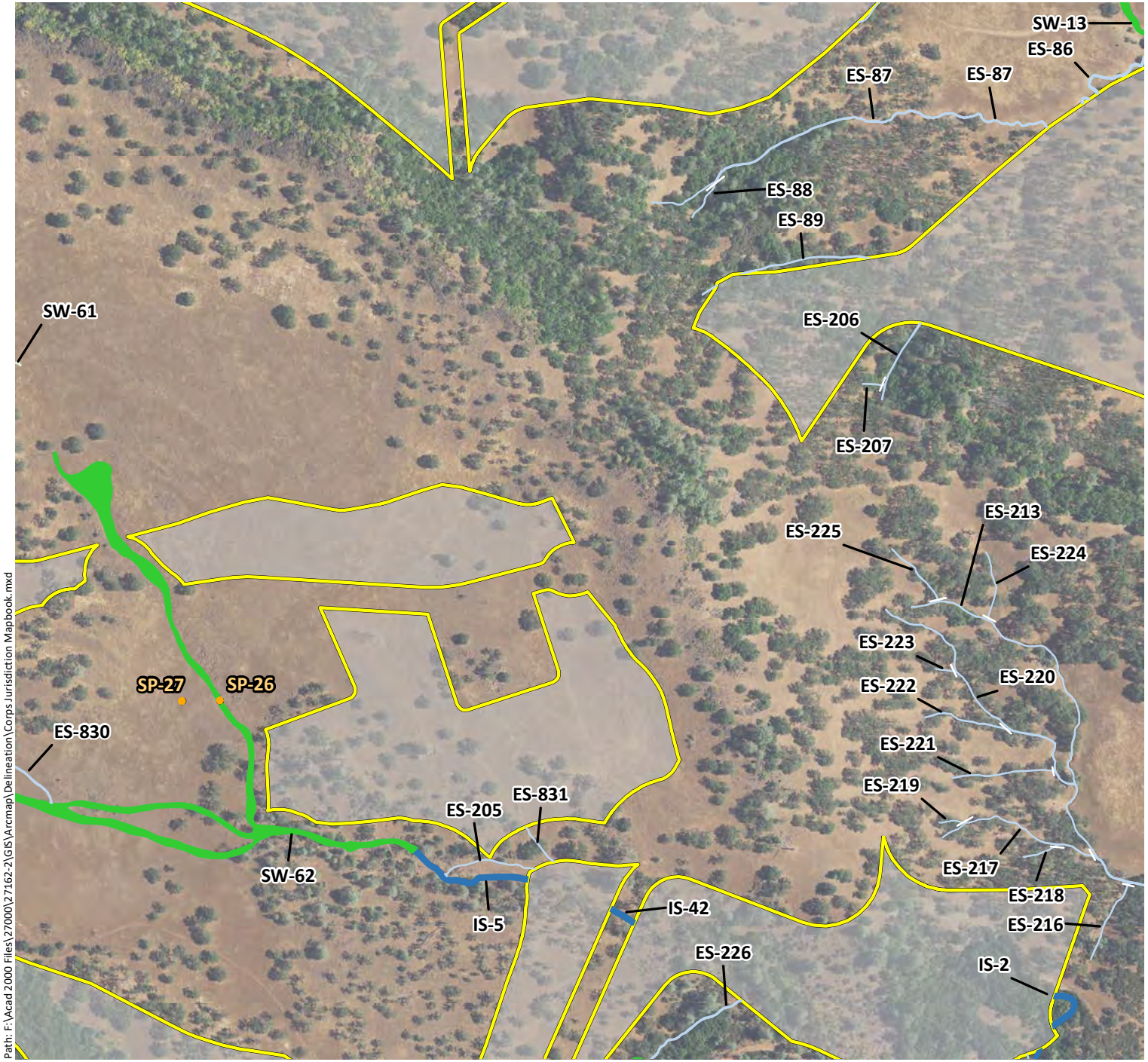
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 16)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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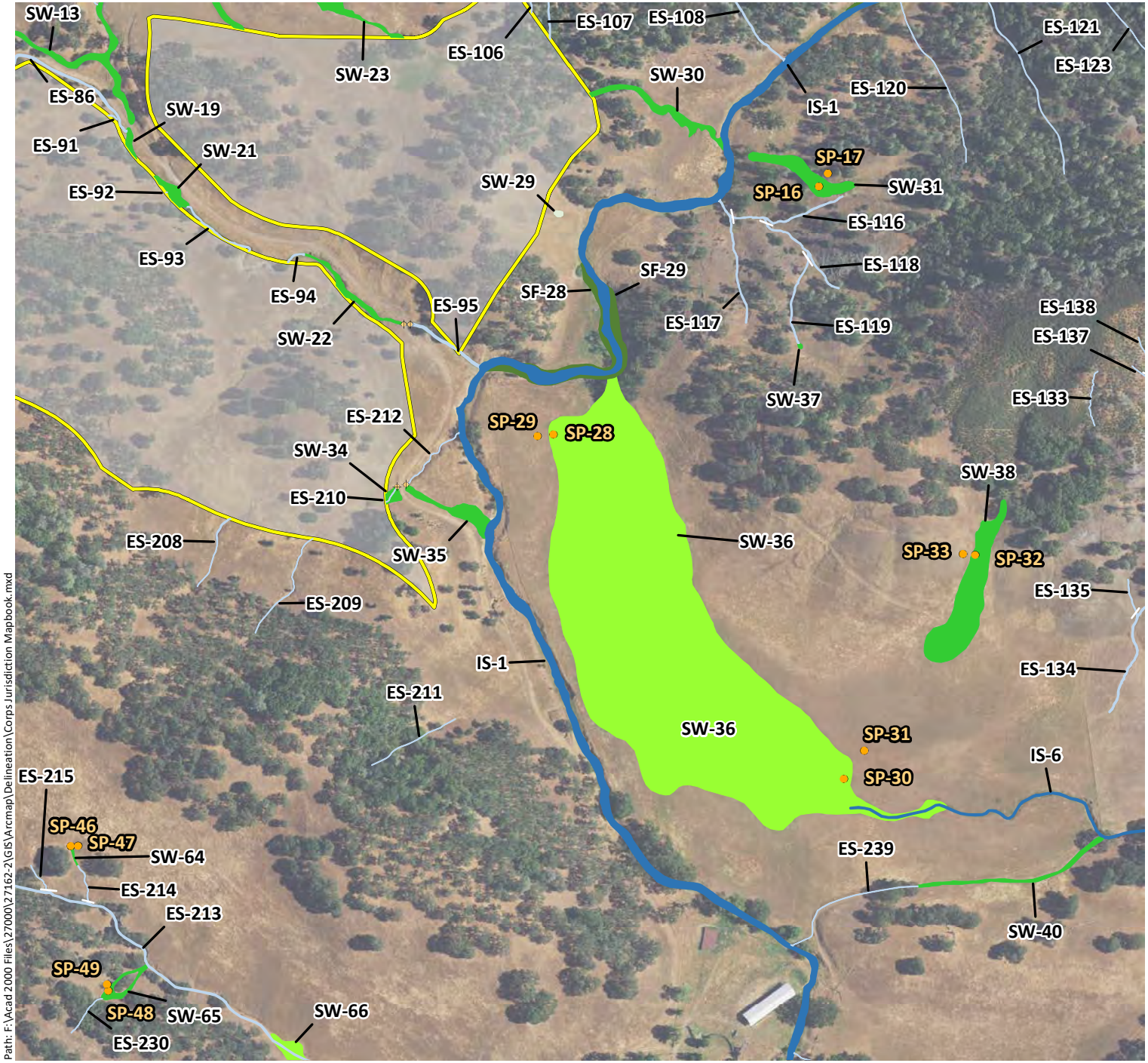
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



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Appendix B. Potential Waters of the United States (Mapbook Sheet 17)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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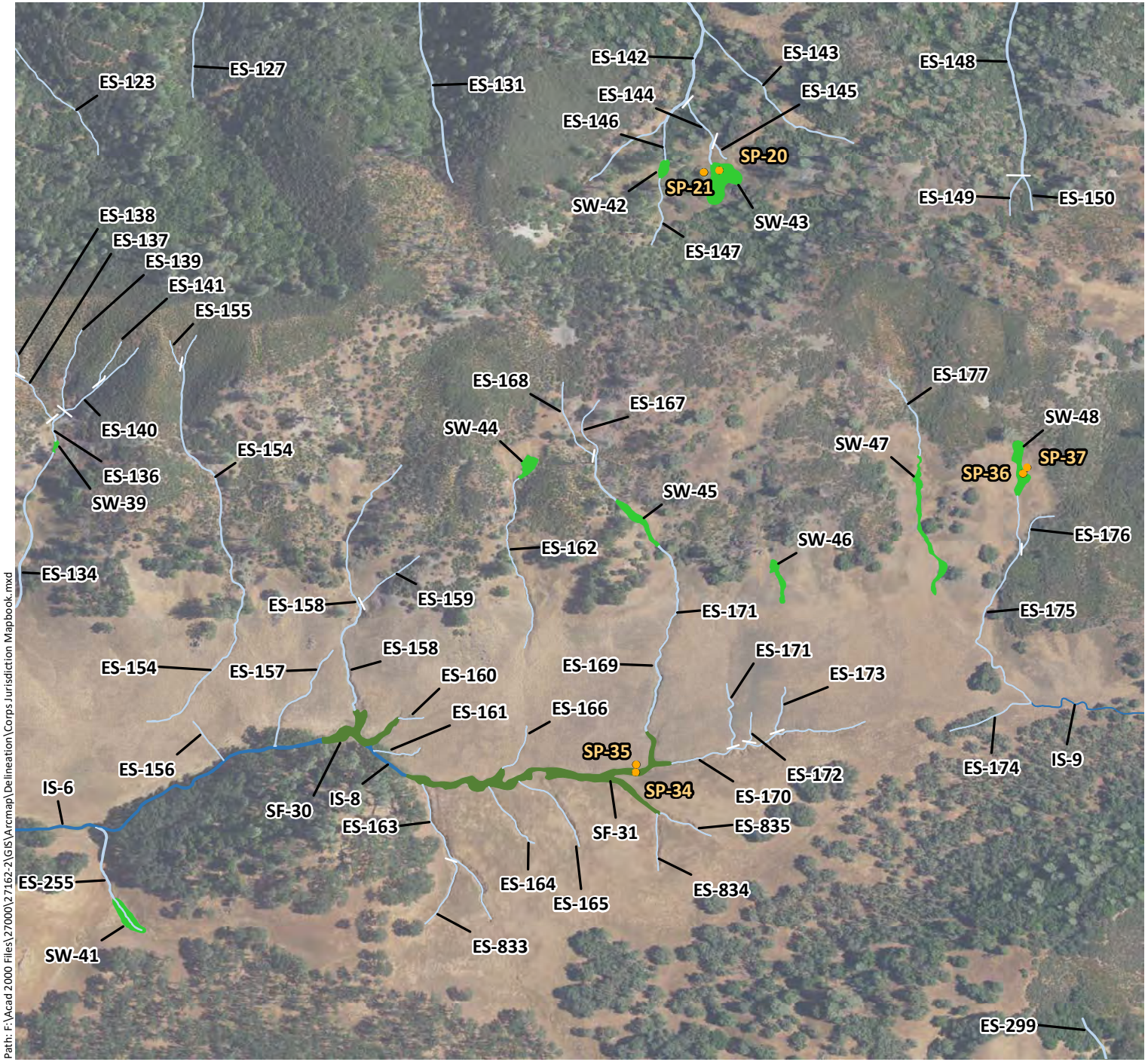
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 18)

Maha Resort and Guenoc Valley Development, Phase 1



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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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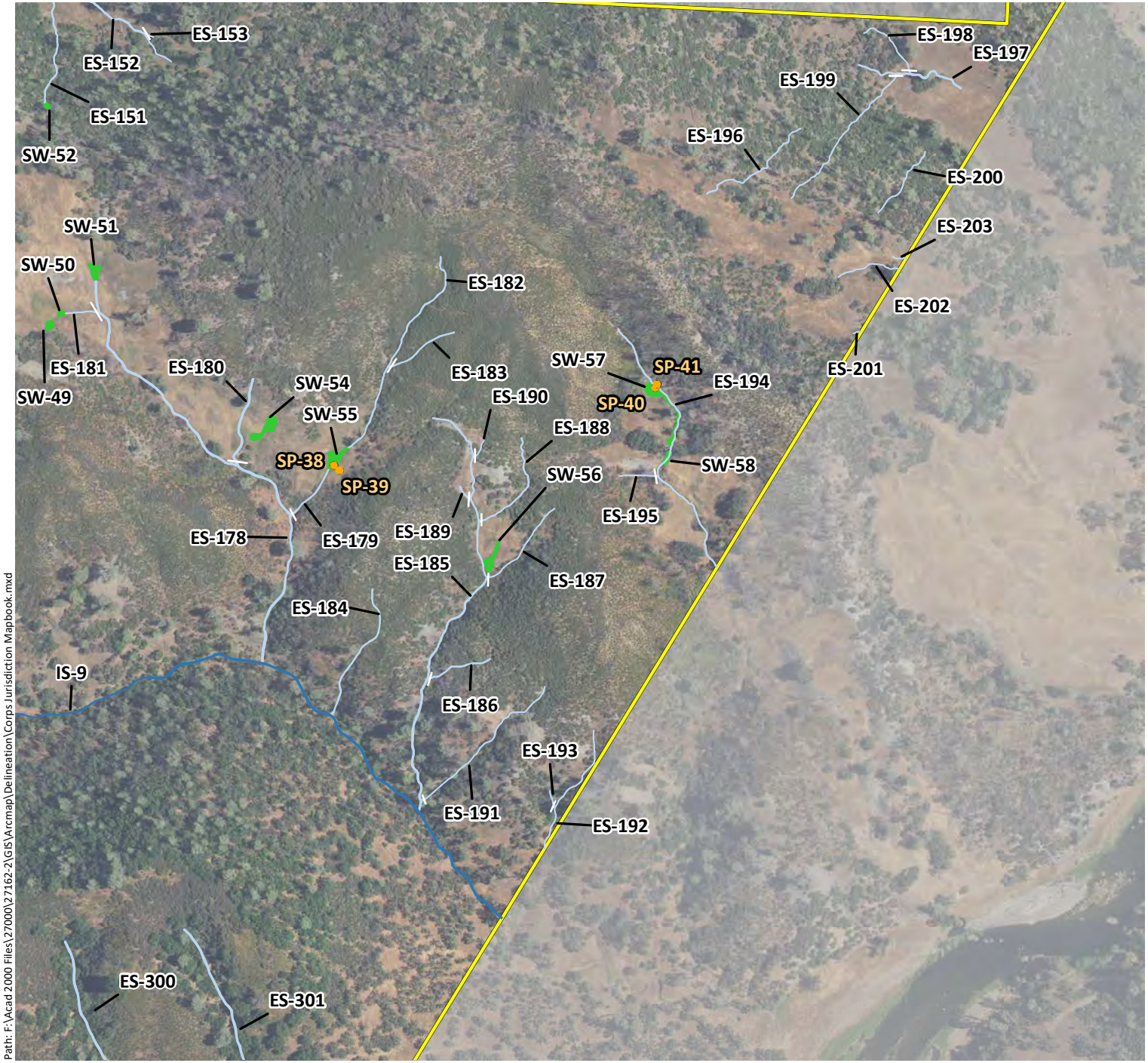
Appendix B.
Potential Waters of the United States (Mapbook Sheet 19)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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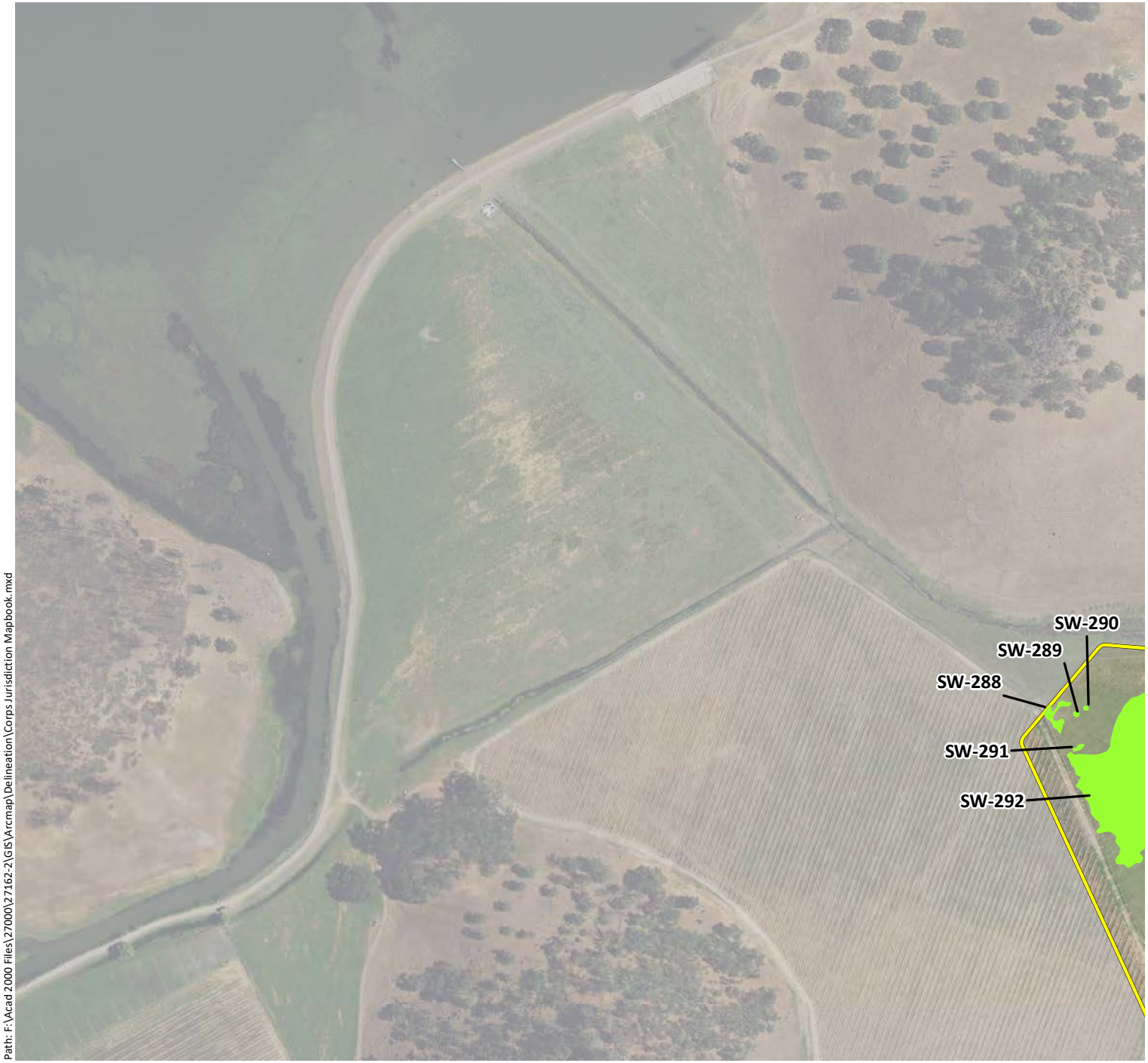
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 20)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

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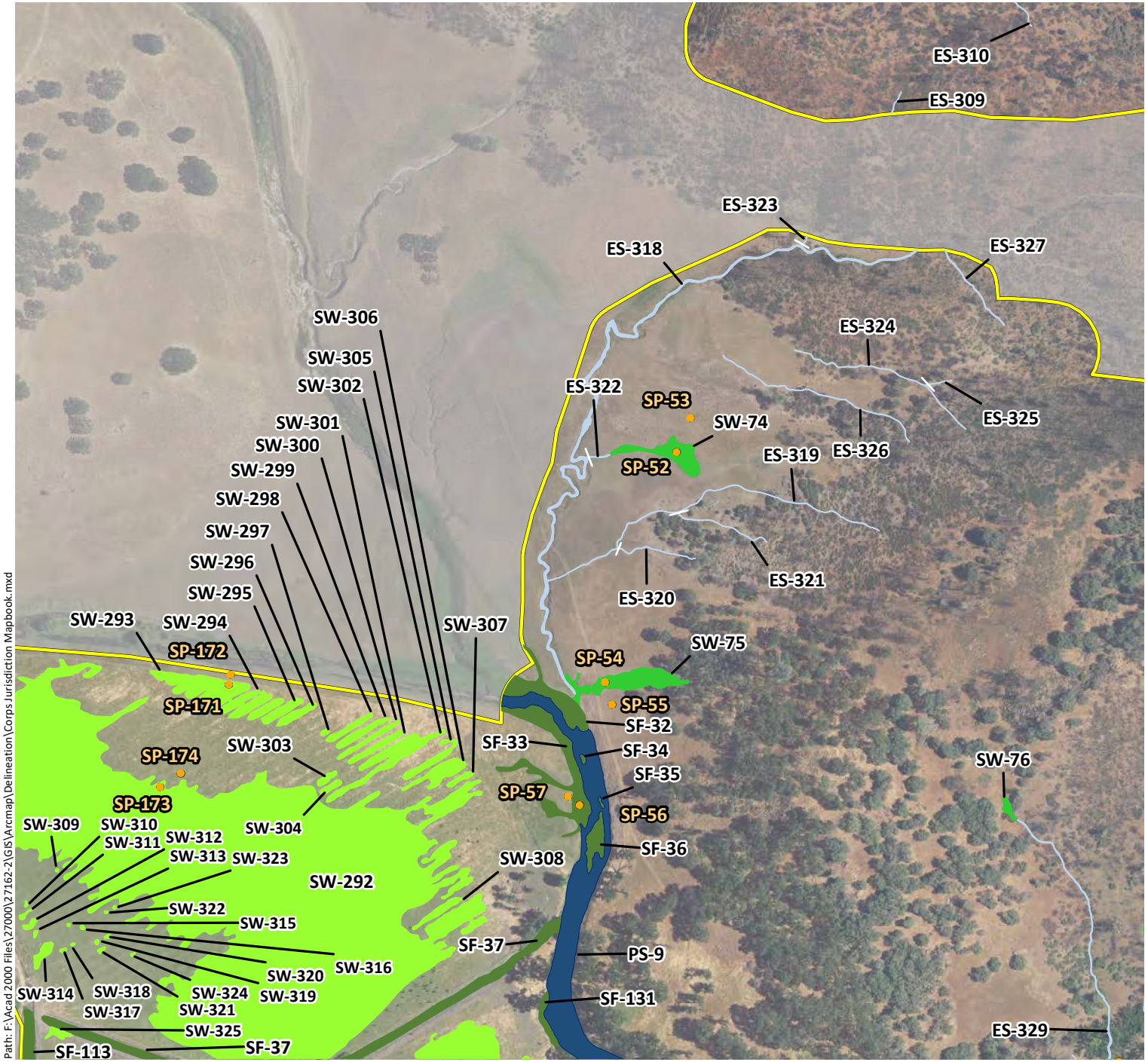
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 21)

Maha Resort and Guenoc Valley Development, Phase 1



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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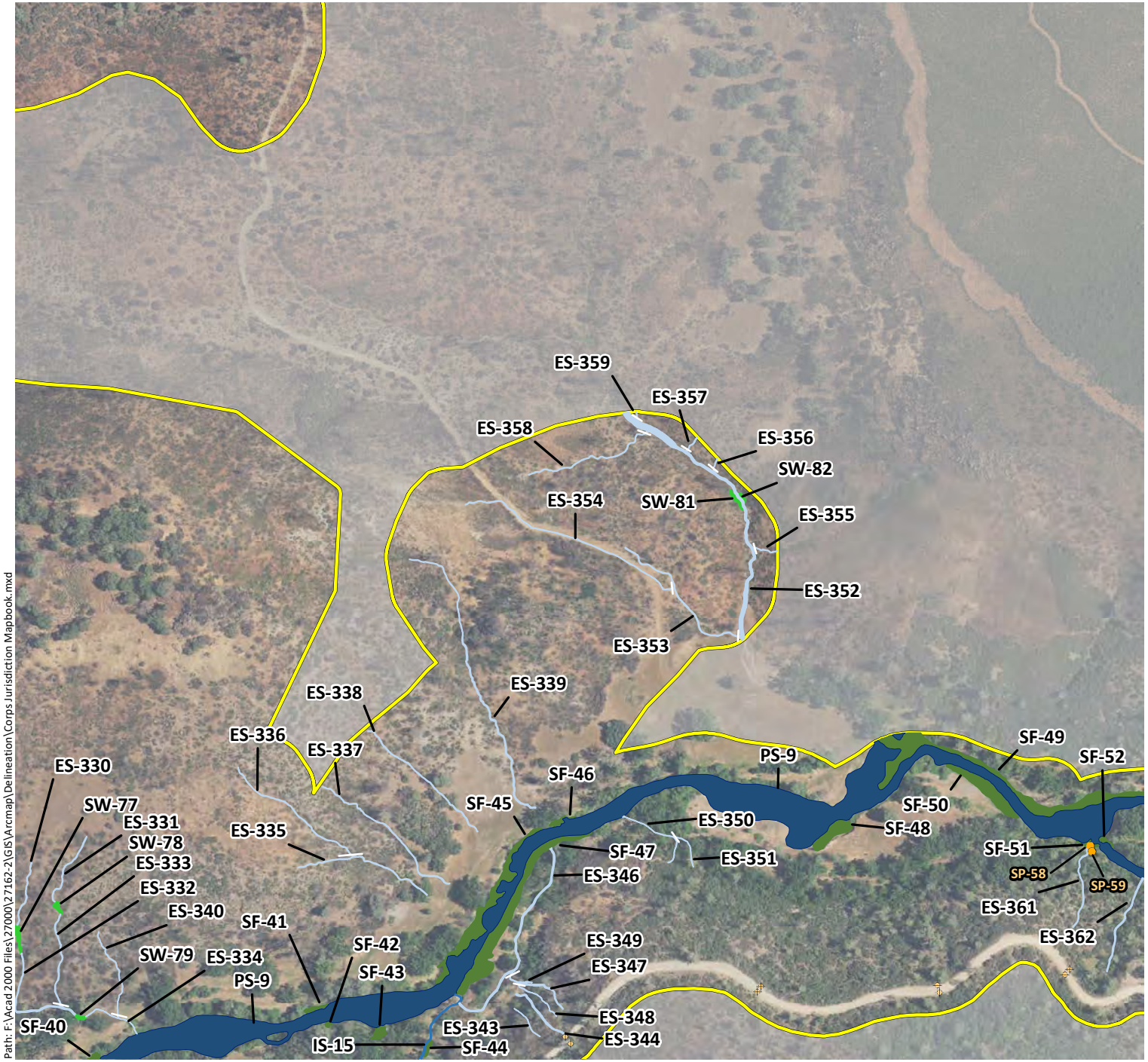
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 22)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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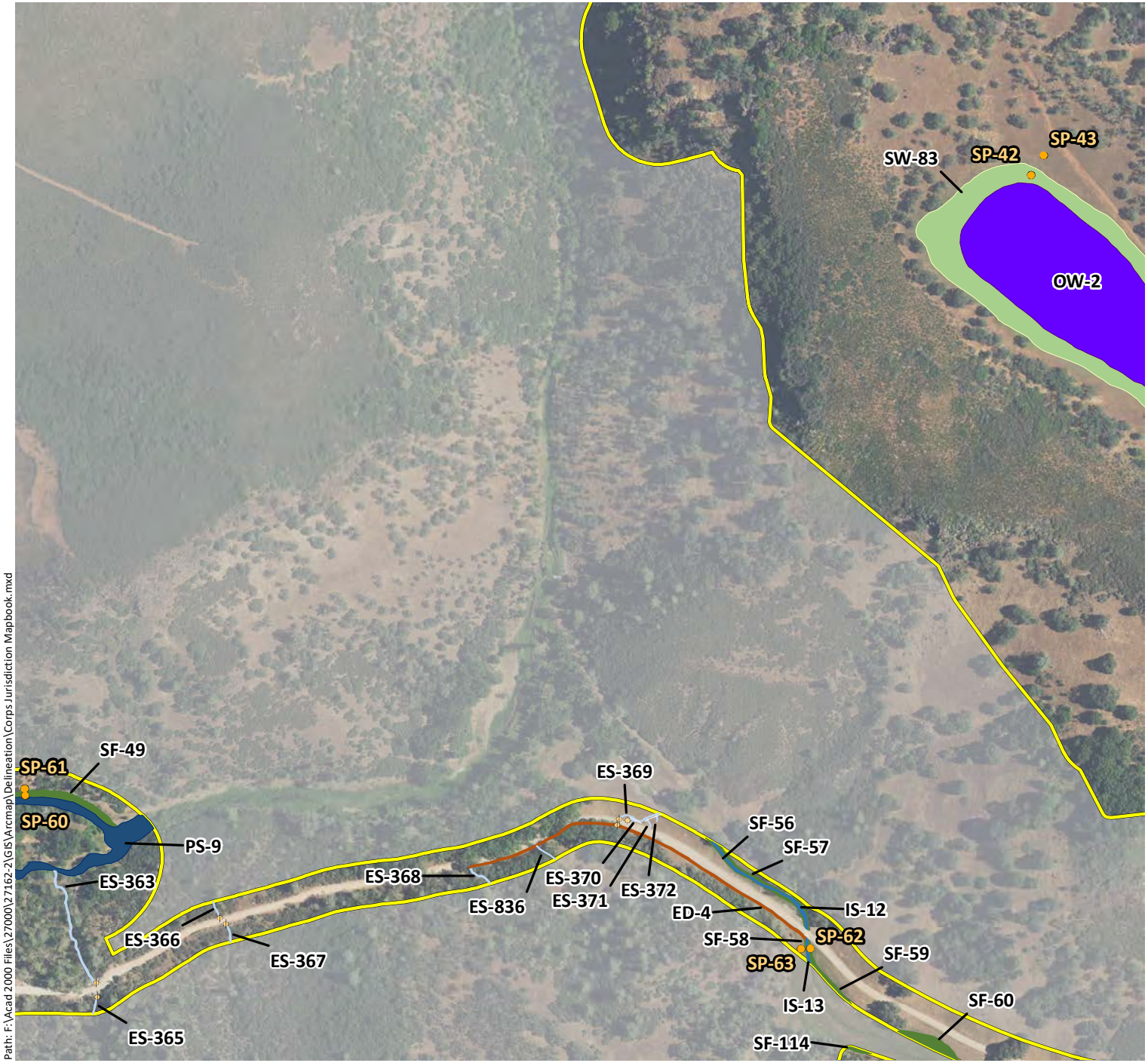
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 23)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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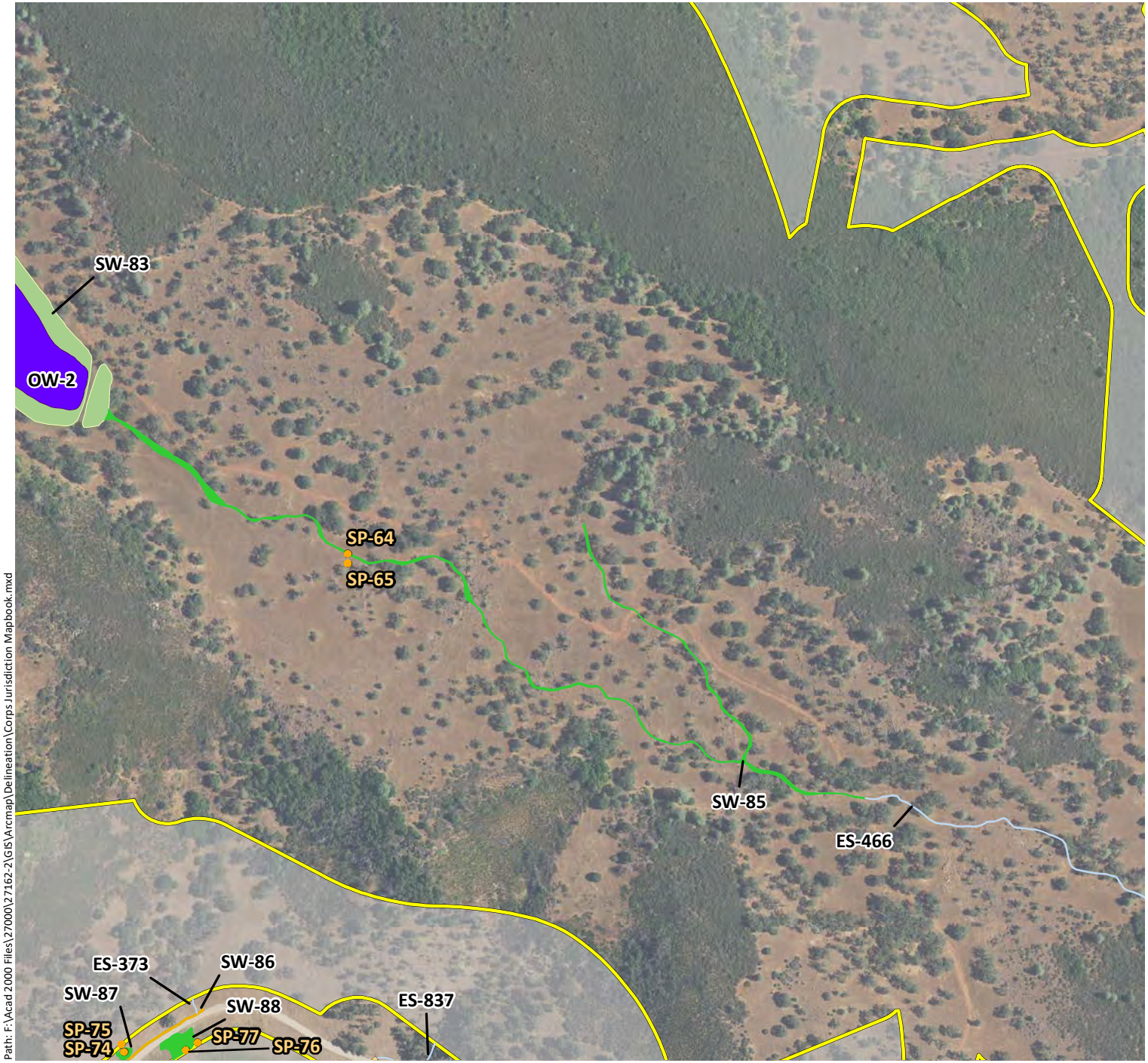
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 24)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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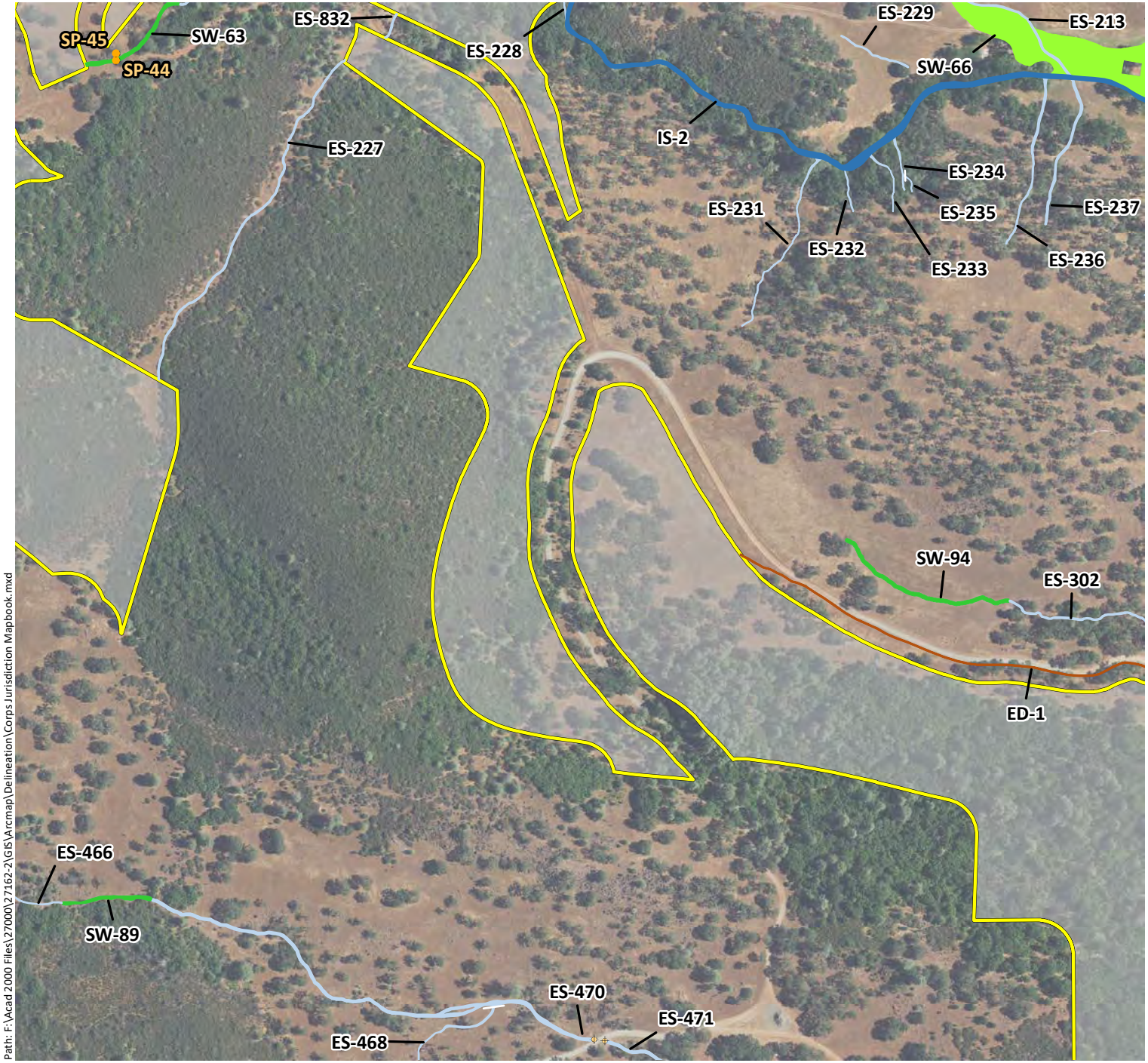
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 25)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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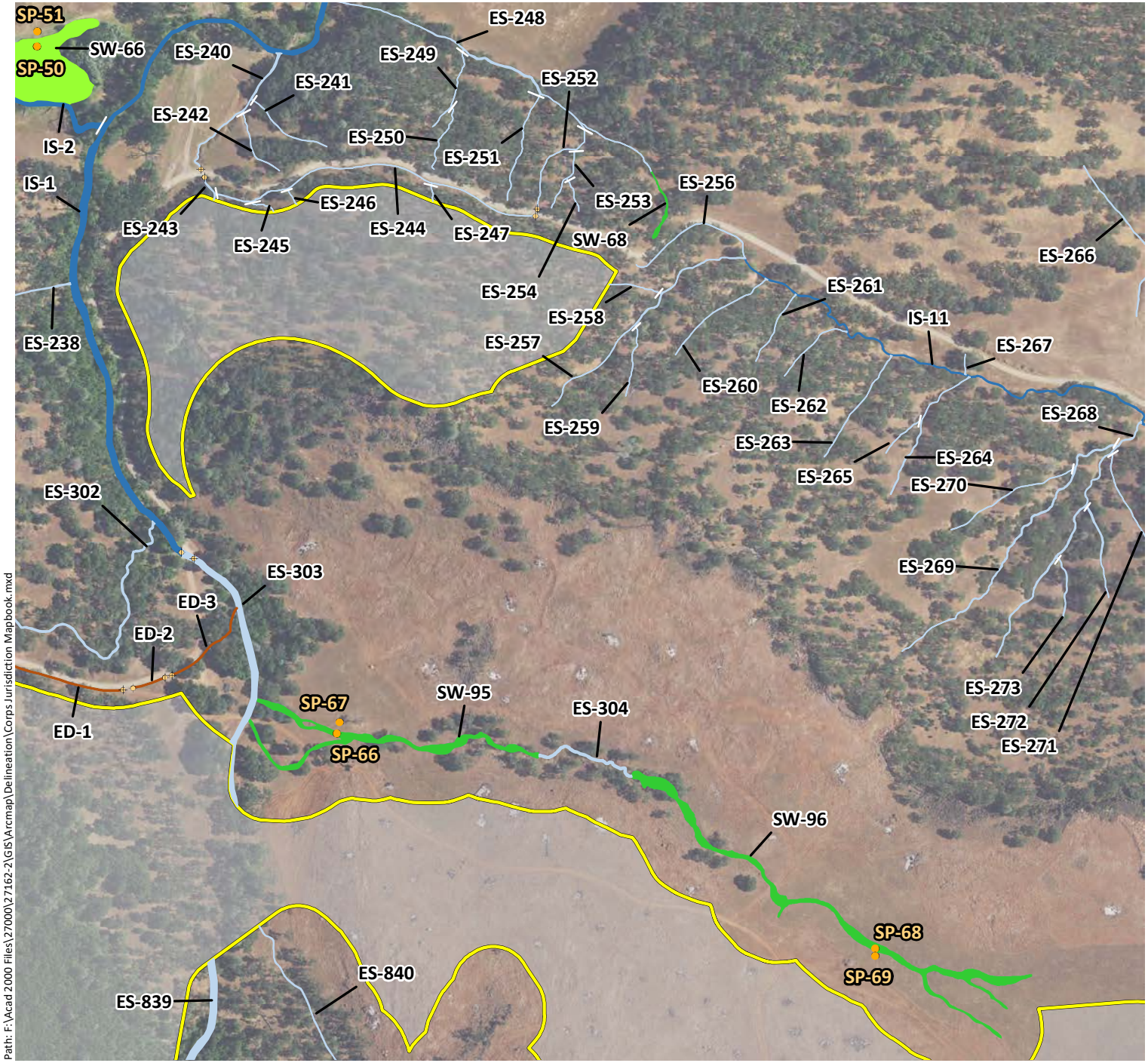
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 26)

Maha Resort and Guenoc Valley Development, Phase 1

- Phase 1 Study Area - 5,350 ac.
- Sample Points
- Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 27)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 28)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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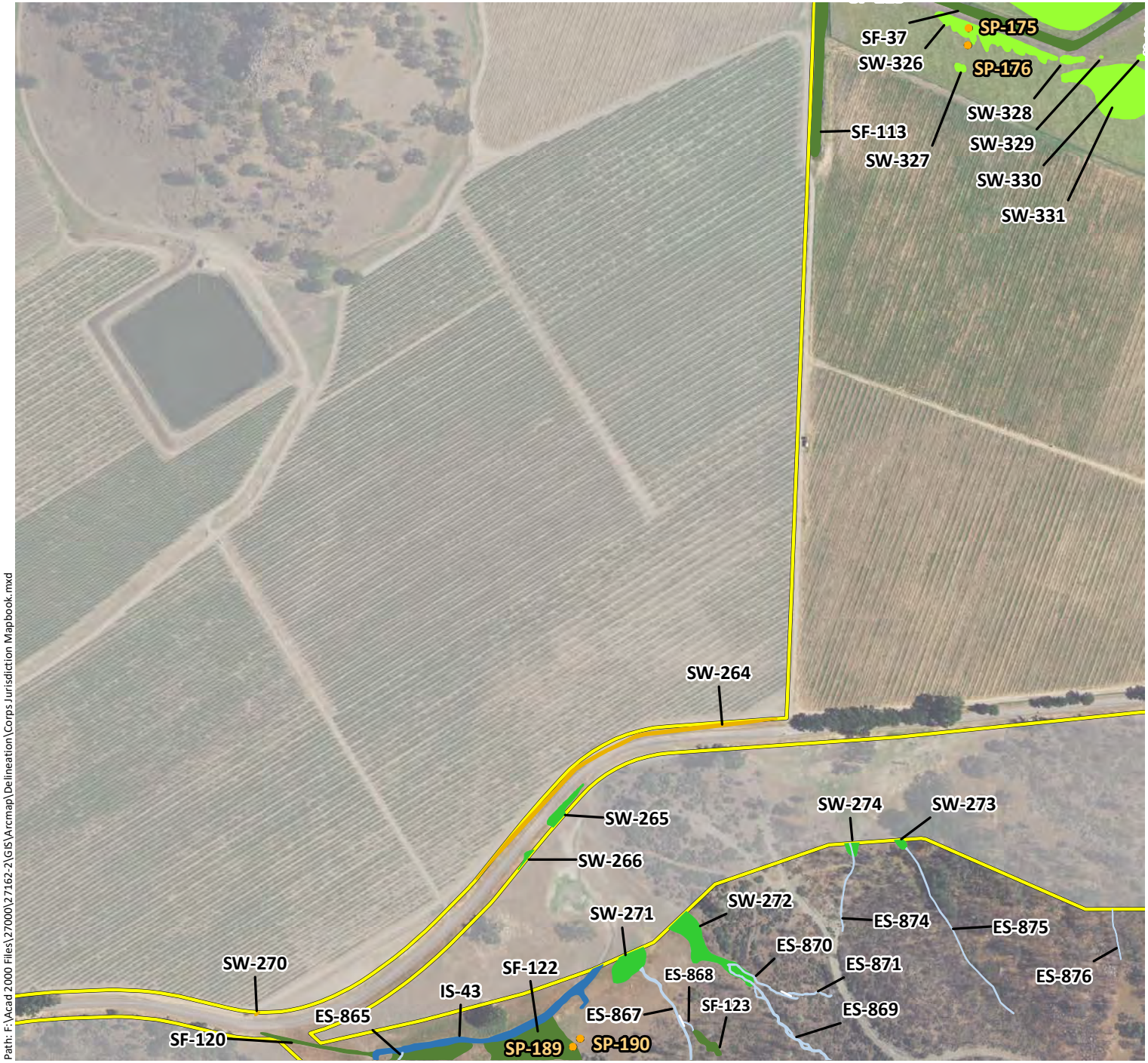
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 29)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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ENVIRONMENTAL CONSULTANTS

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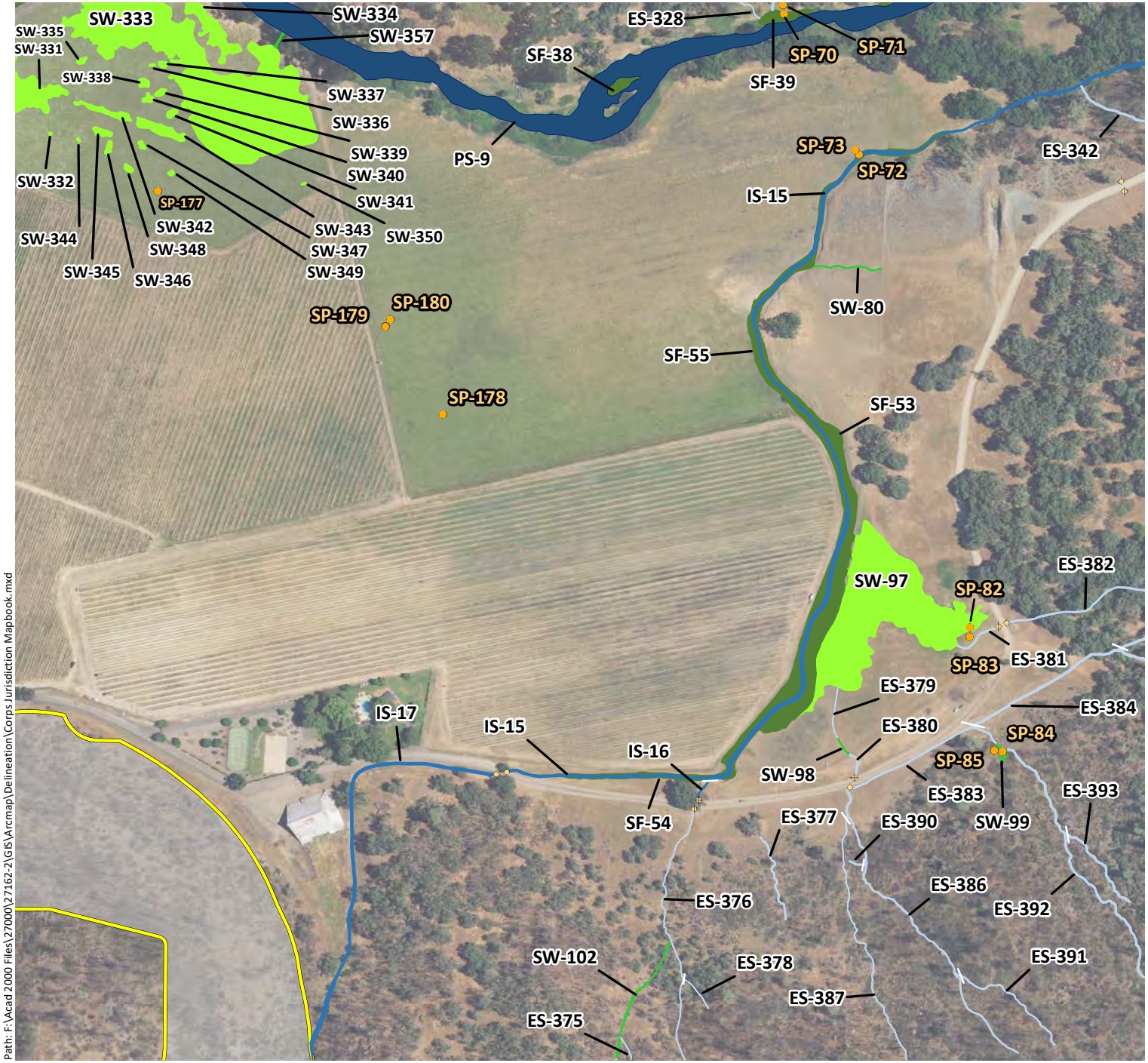
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 30)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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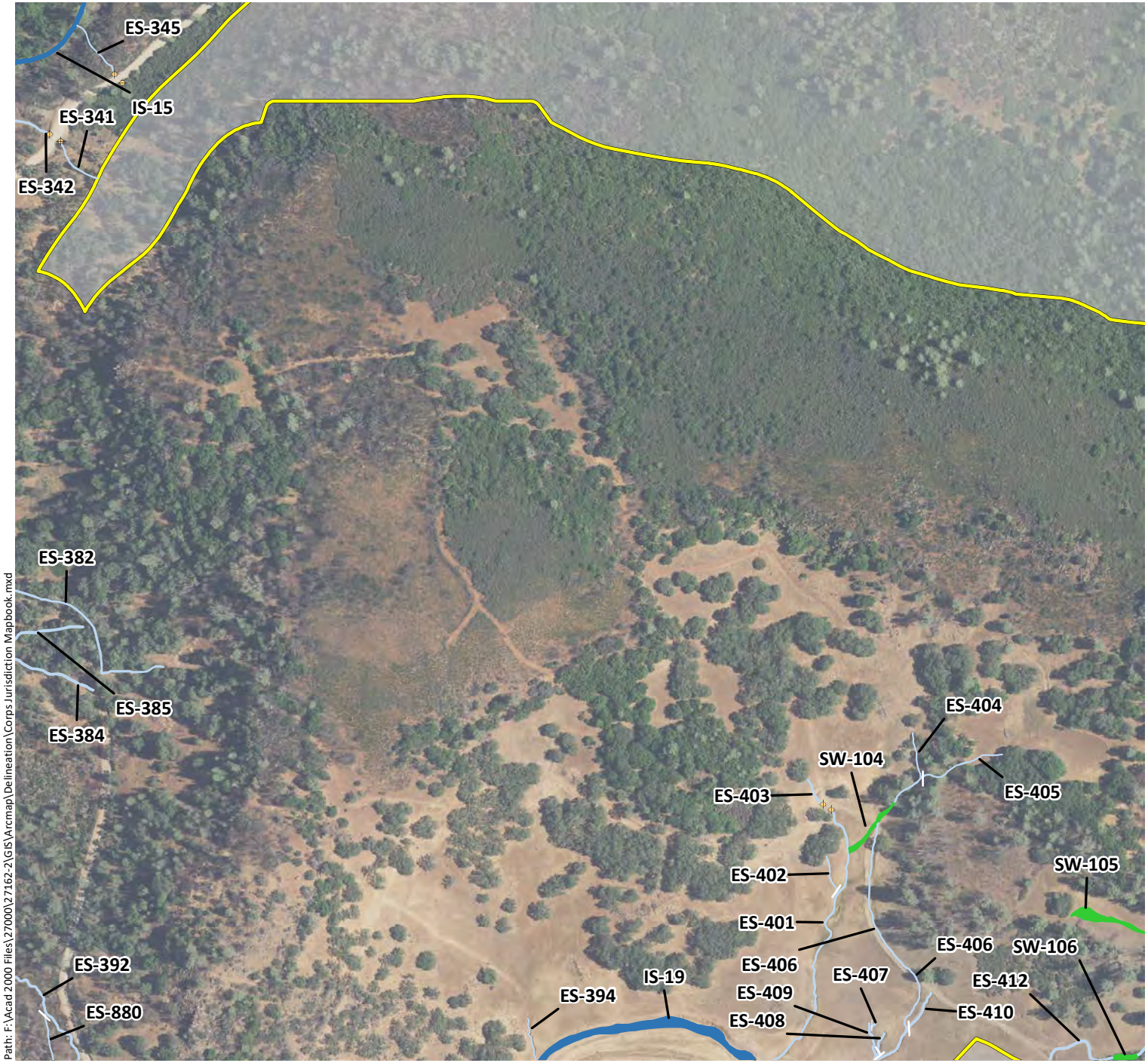
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 31)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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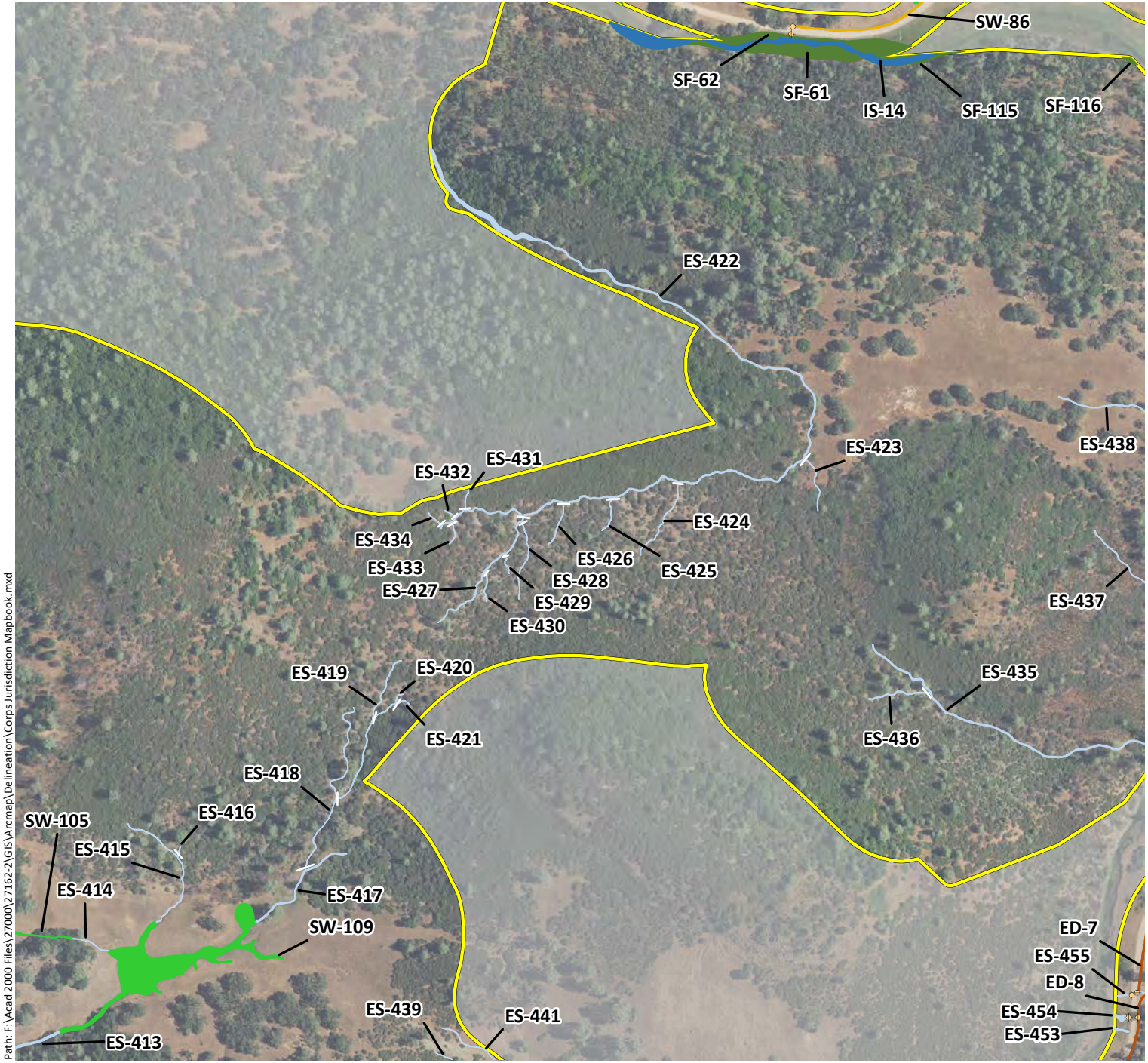
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 32)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 33)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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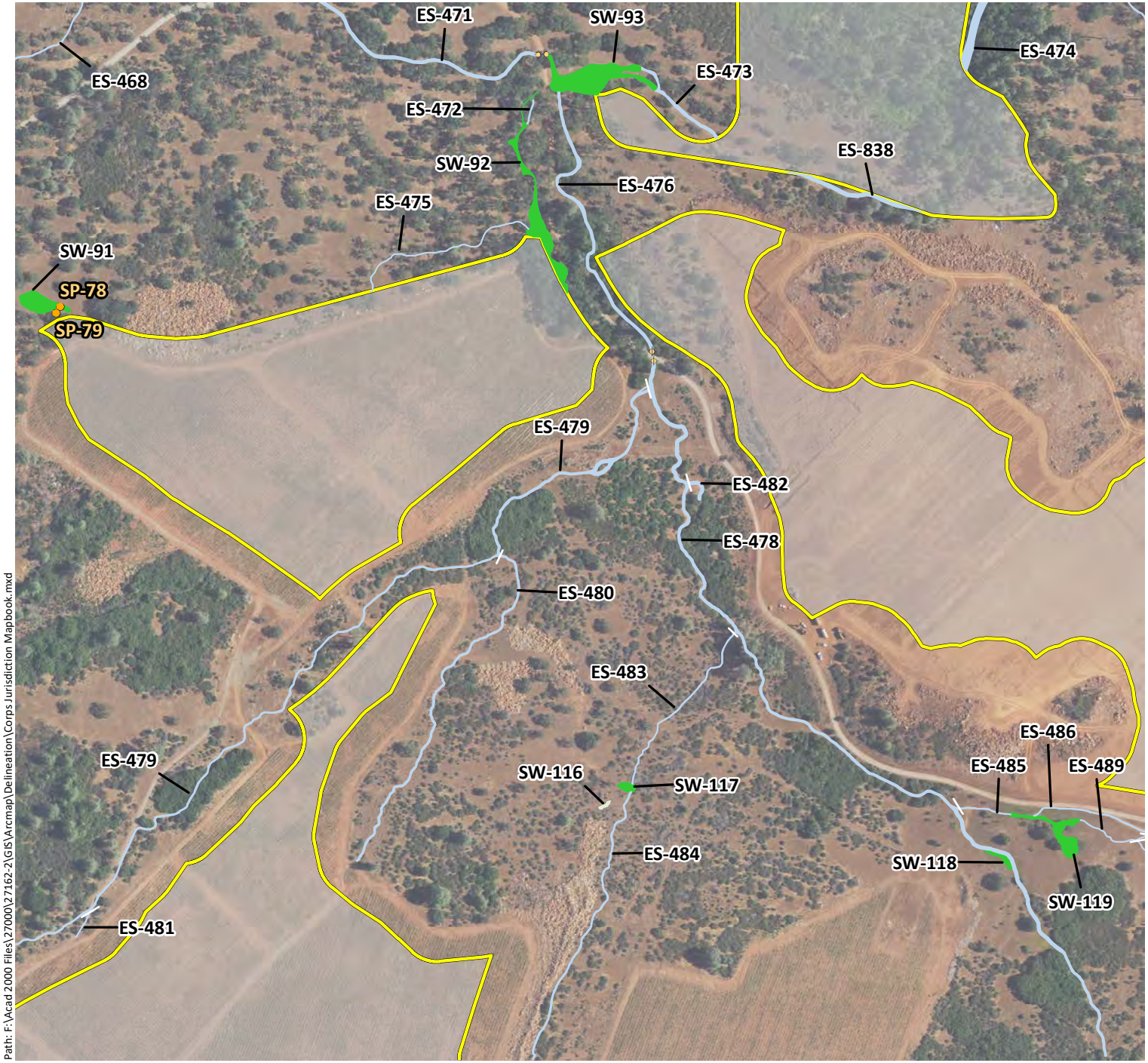
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 34)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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ENVIRONMENTAL CONSULTANTS

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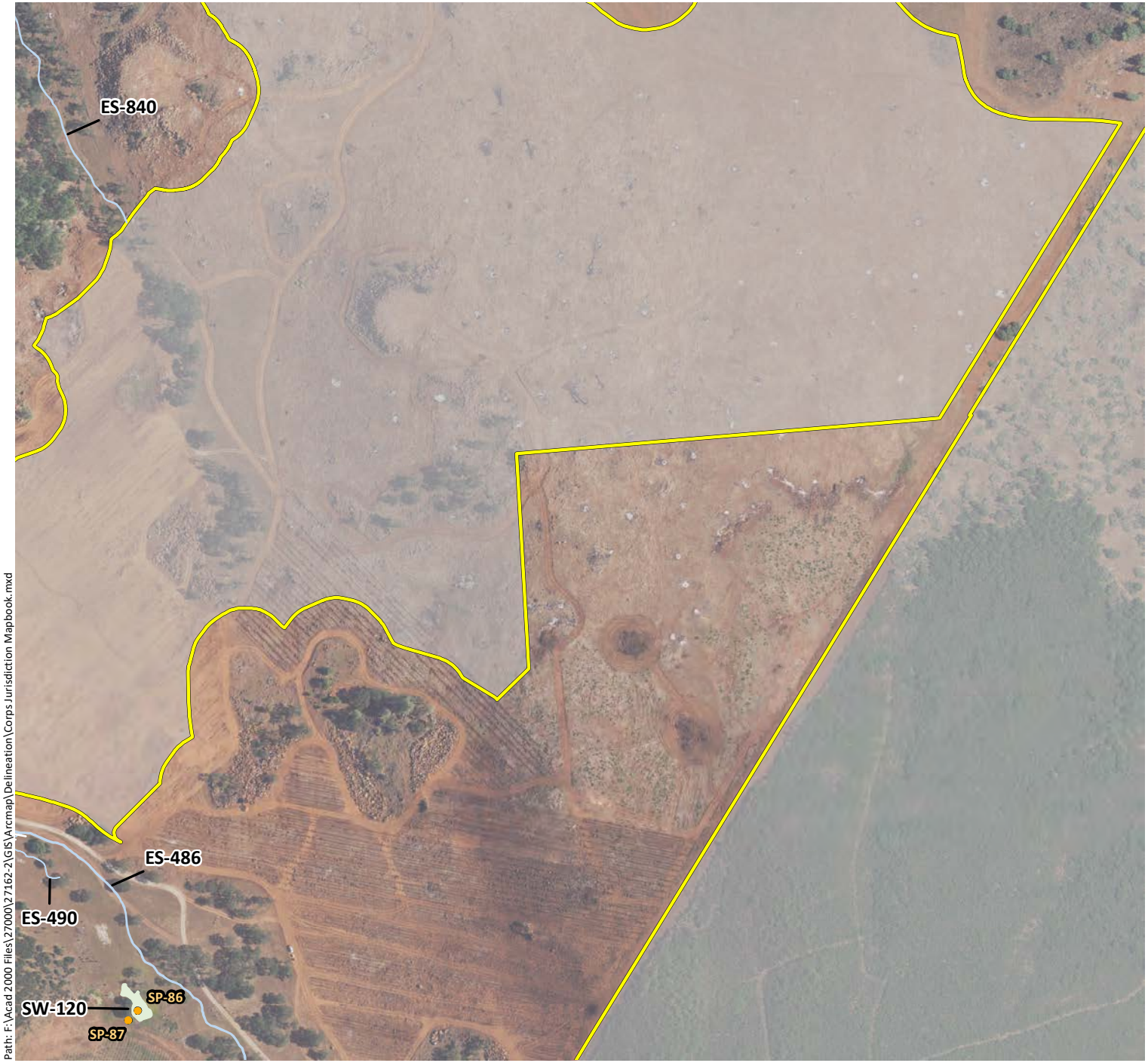
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B.
Potential Waters of the United States (Mapbook Sheet 35)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 36)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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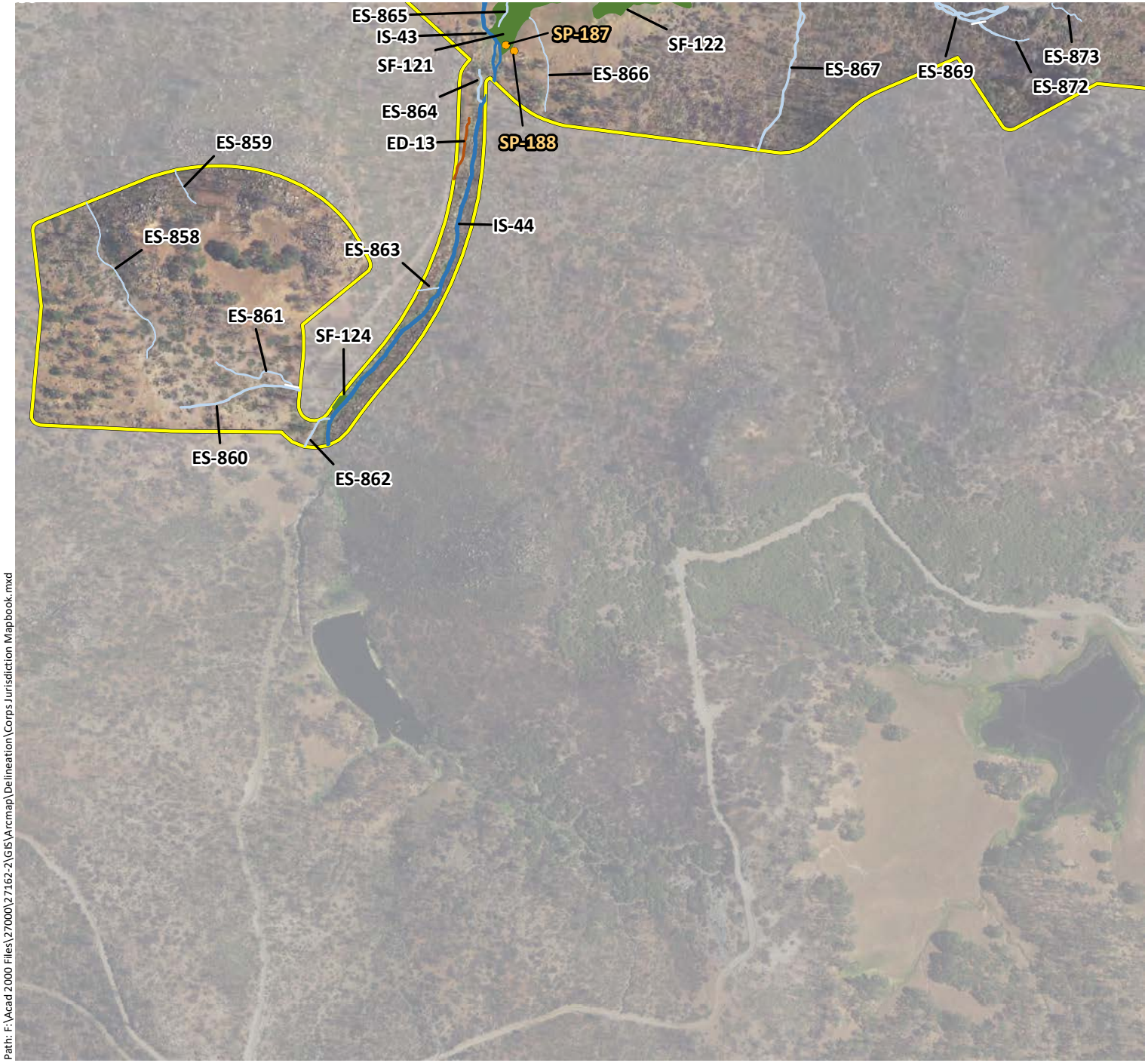
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 37)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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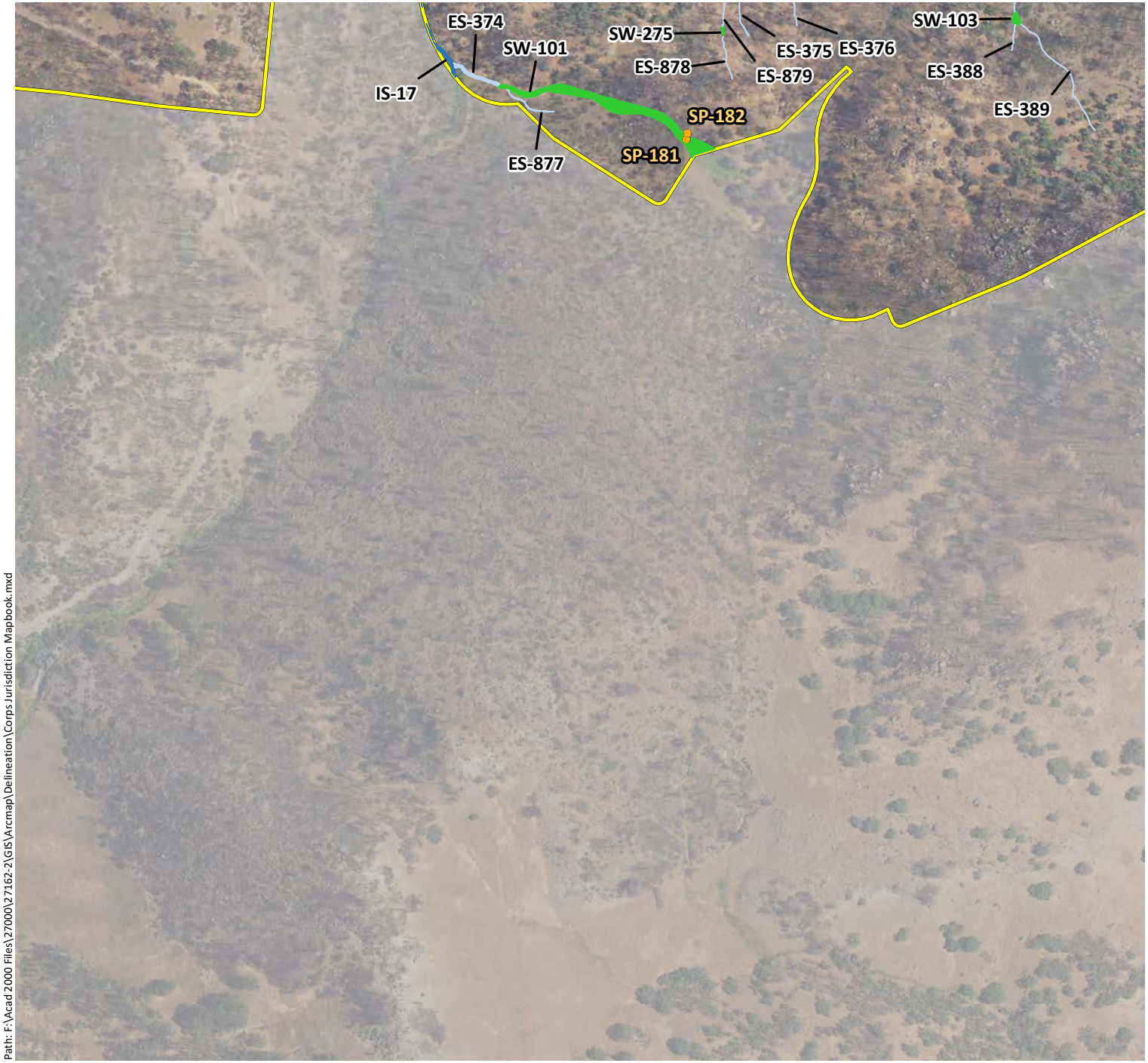
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 38)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 39)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 40)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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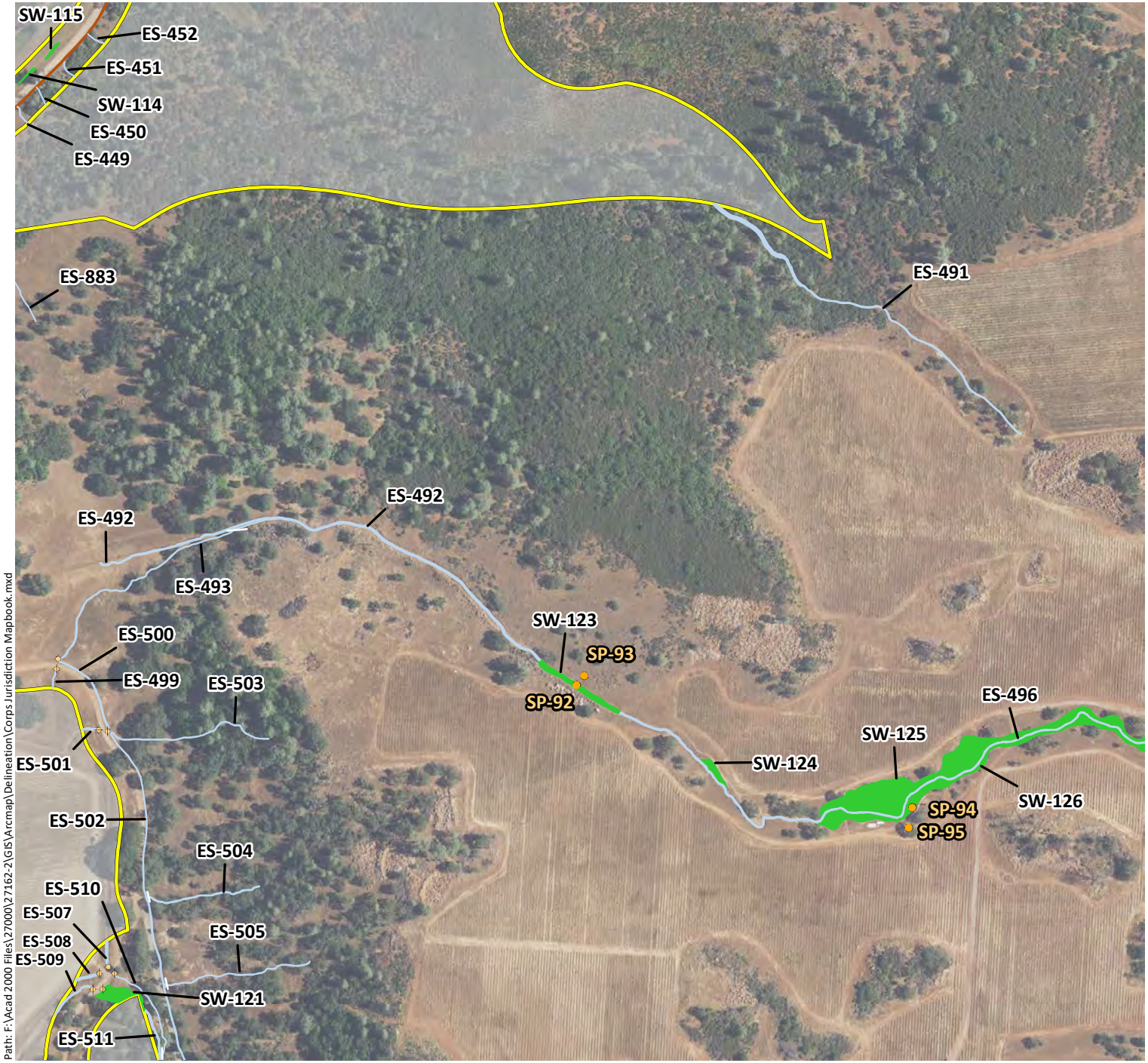
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 41)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 42)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 43)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.
Sample Points
Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 44)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.
Sample Points
Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 45)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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ENVIRONMENTAL CONSULTANTS

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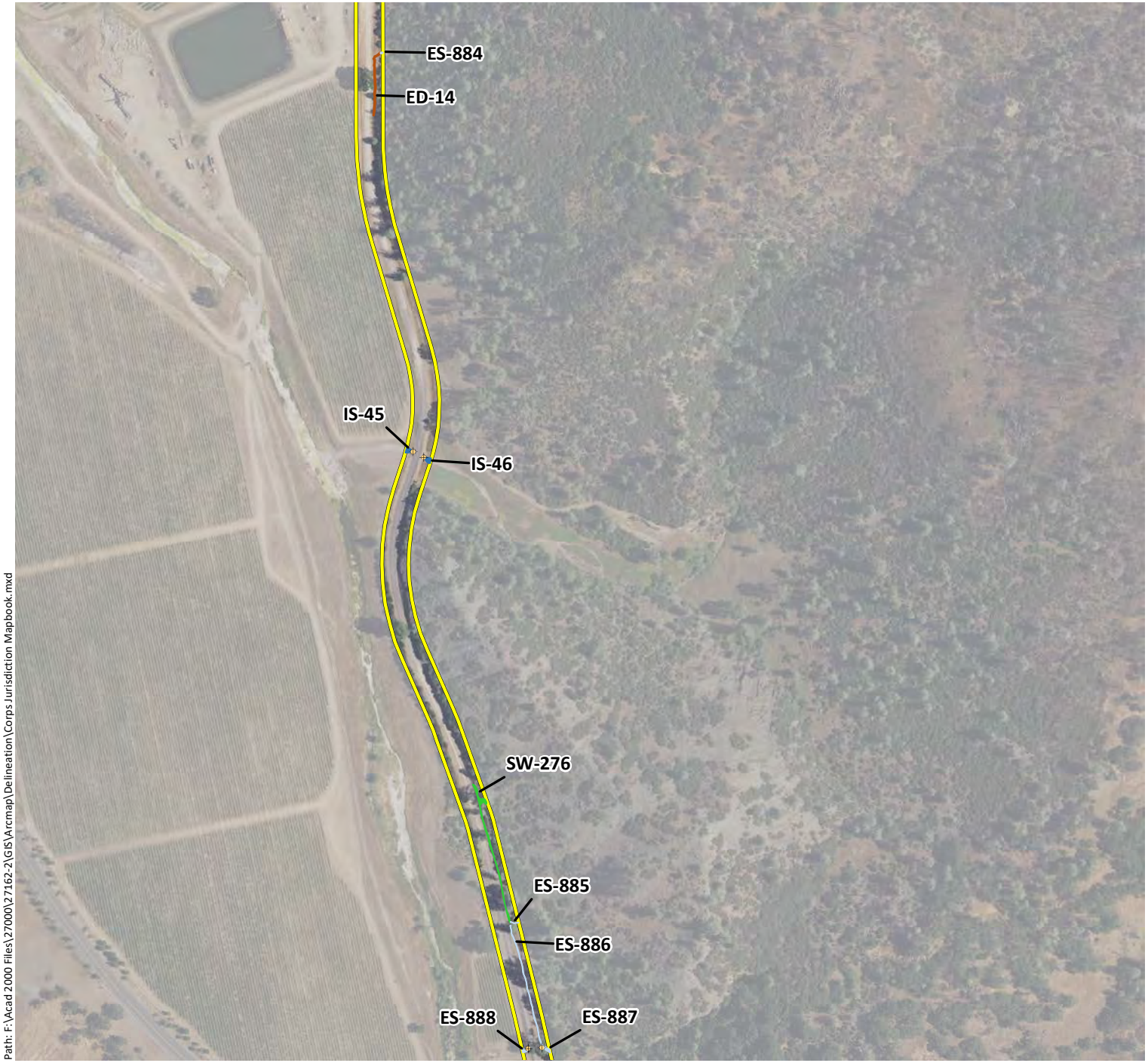
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 46)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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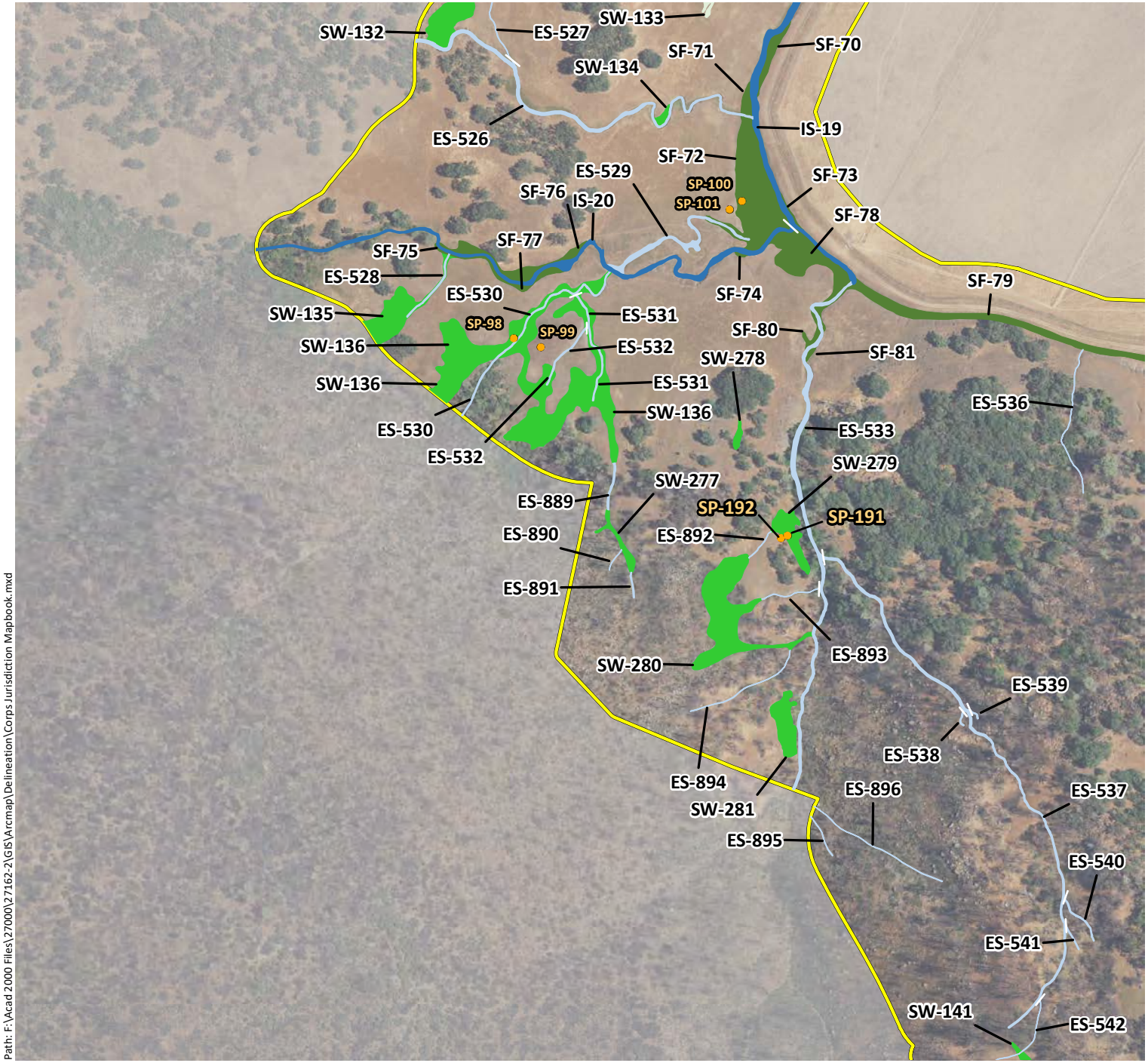
Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 47)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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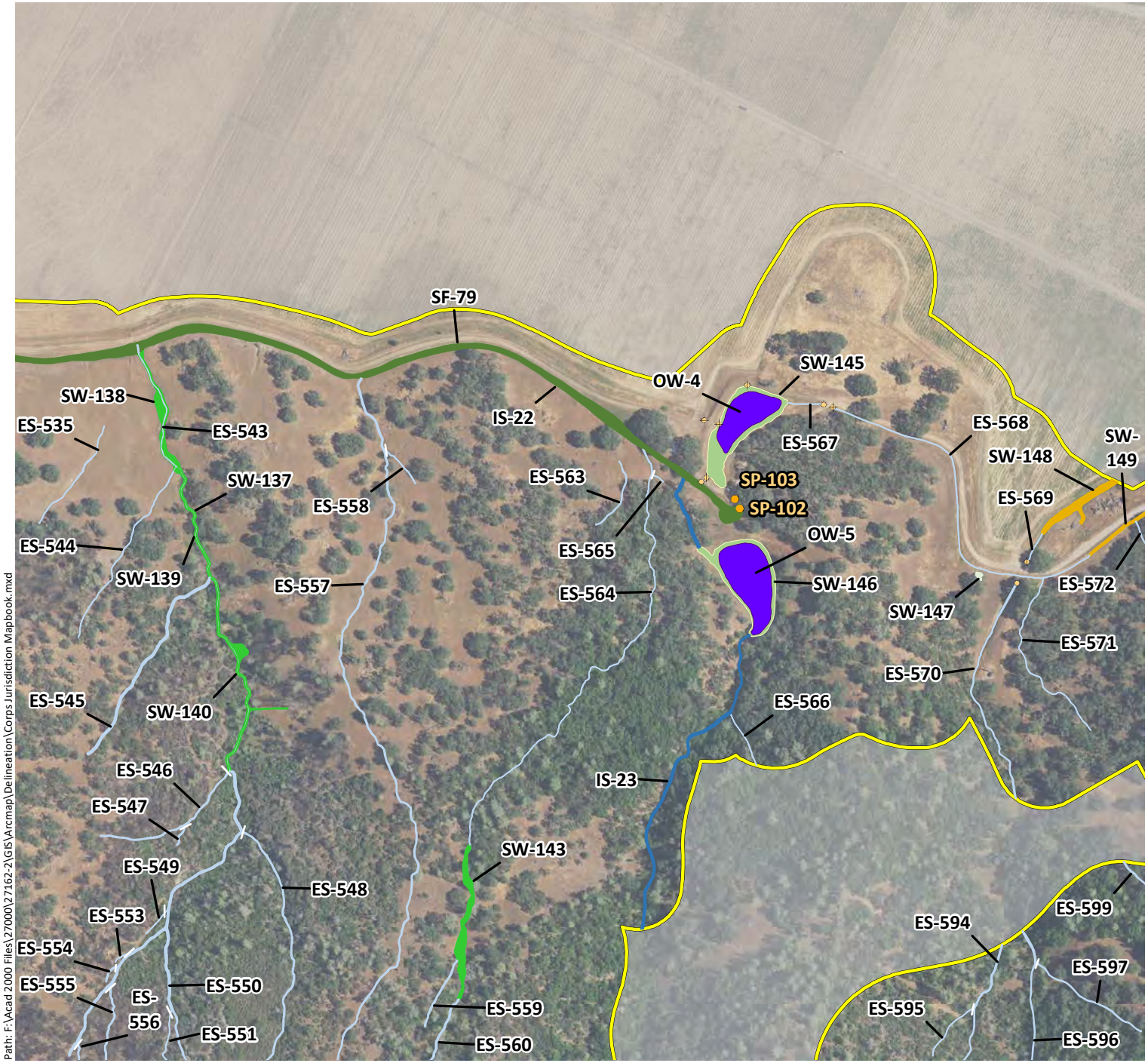
Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 48)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 49)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 50)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 51)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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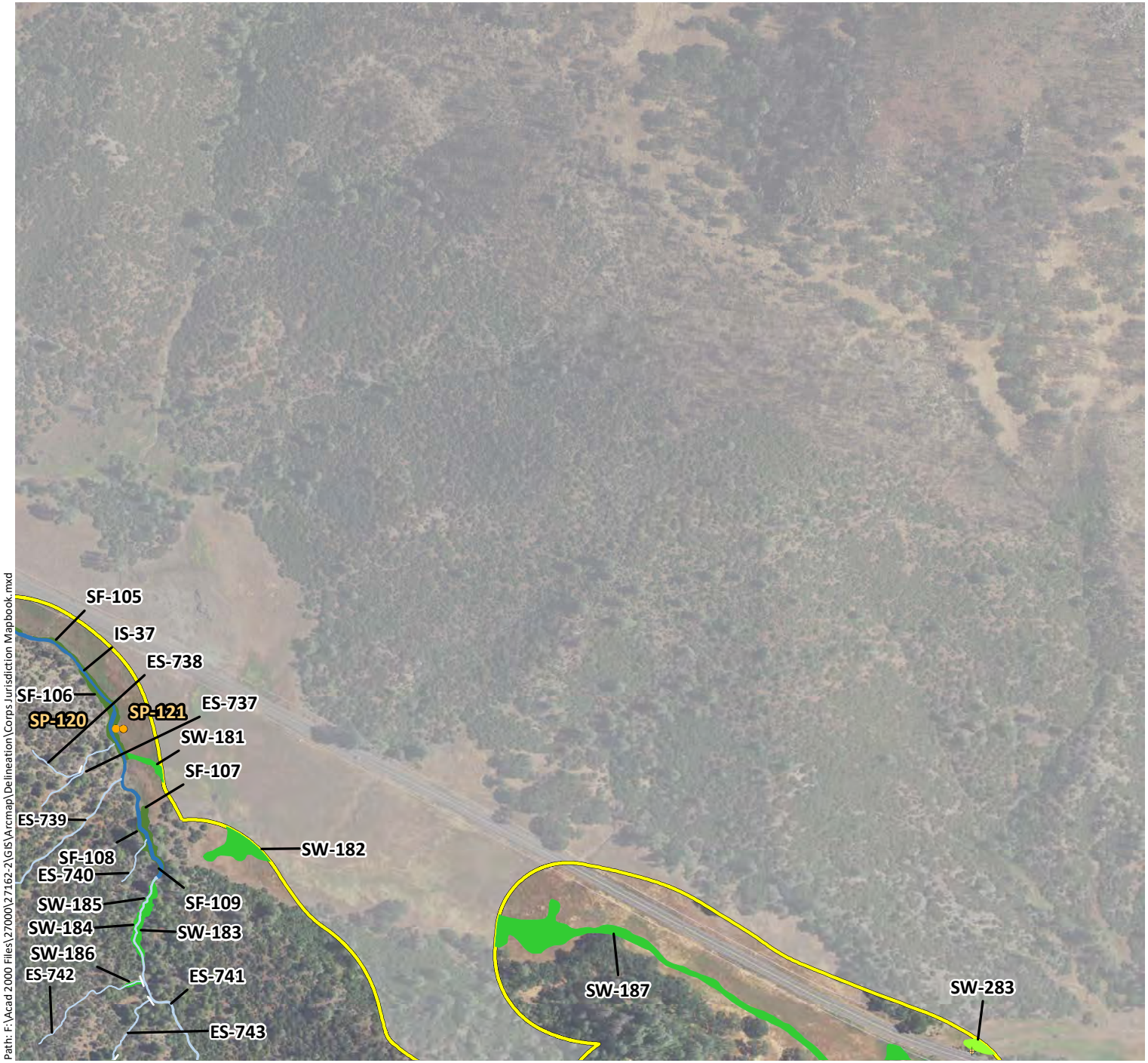
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 52)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

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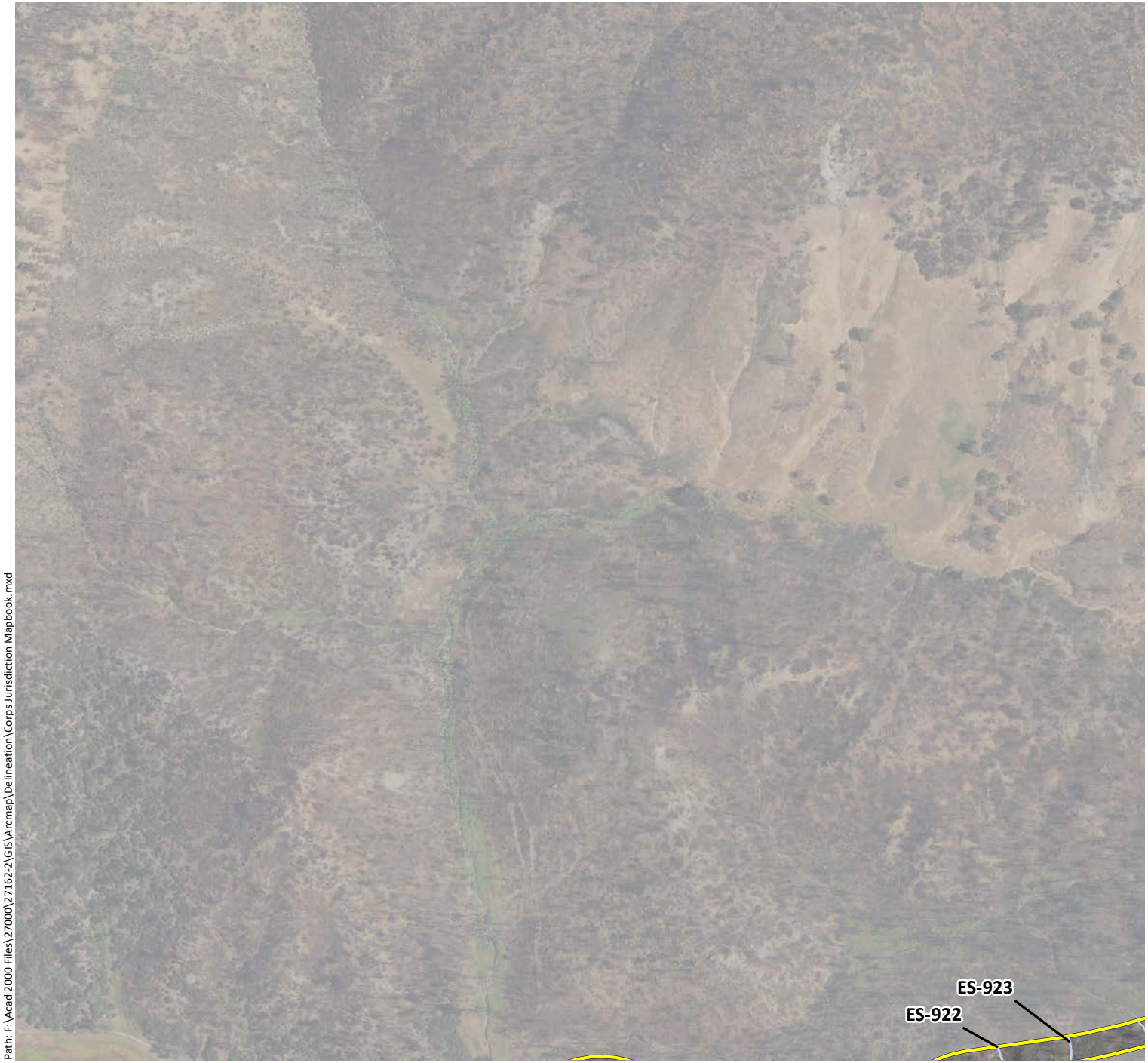
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 53)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

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Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 54)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

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Feet

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ENVIRONMENTAL CONSULTANTS

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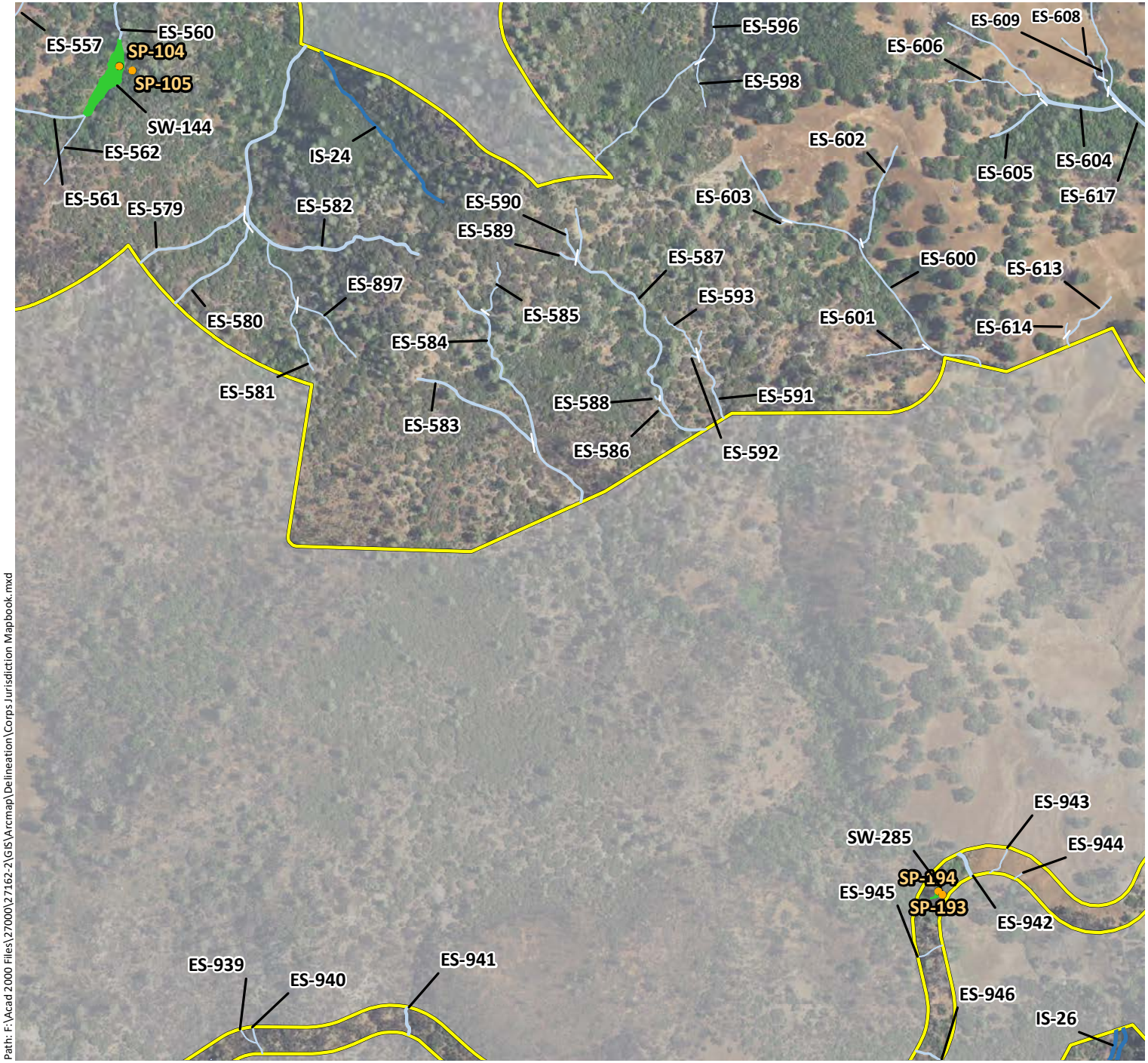
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 55)

Maha Resort and Guenoc Valley Development, Phase 1

- Phase 1 Study Area - 5,350 ac.
- Sample Points
- Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

0 250 500

Feet

wra ENVIRONMENTAL CONSULTANTS

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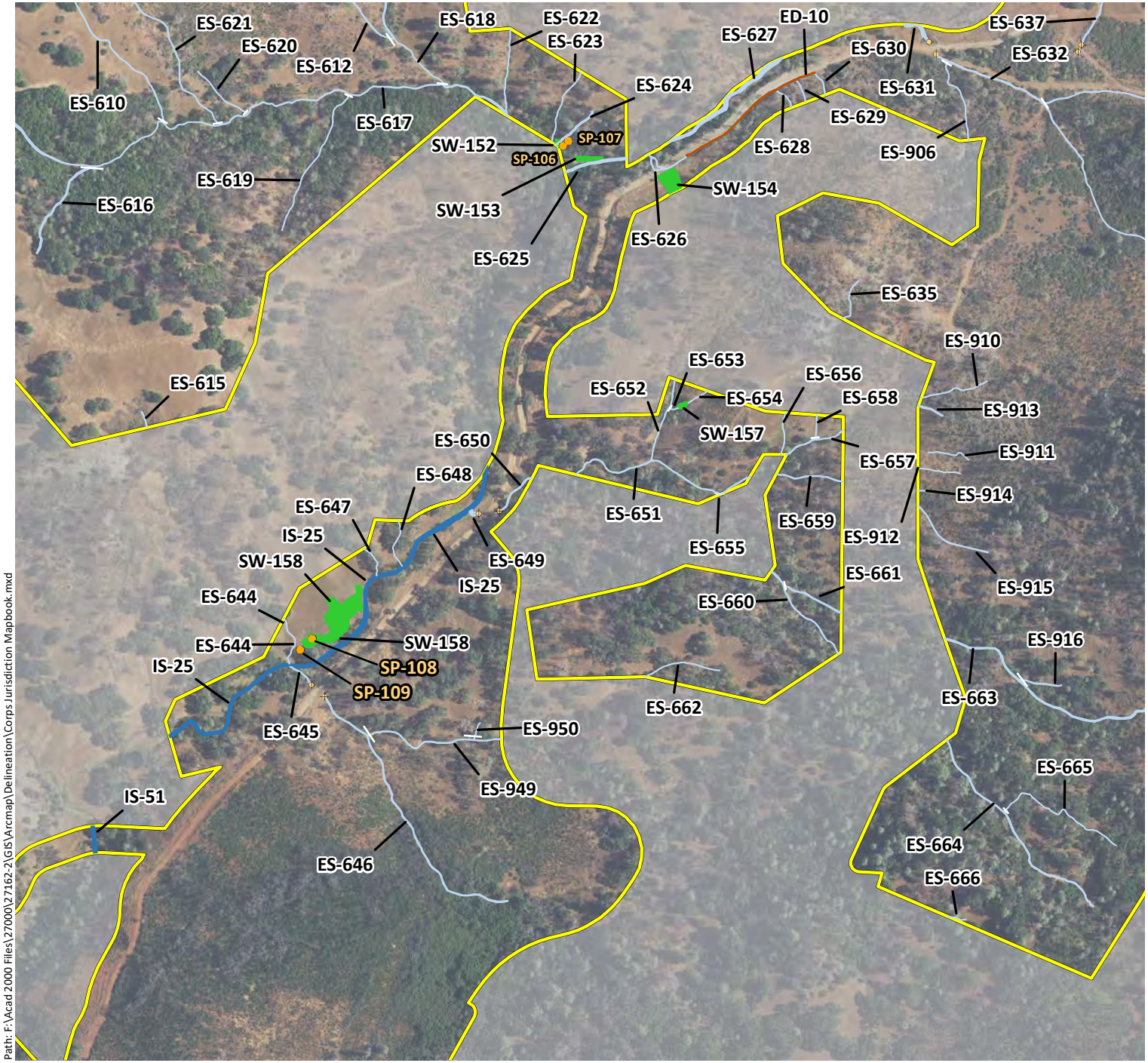
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 56)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

0 250 500

Feet

wra ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 57)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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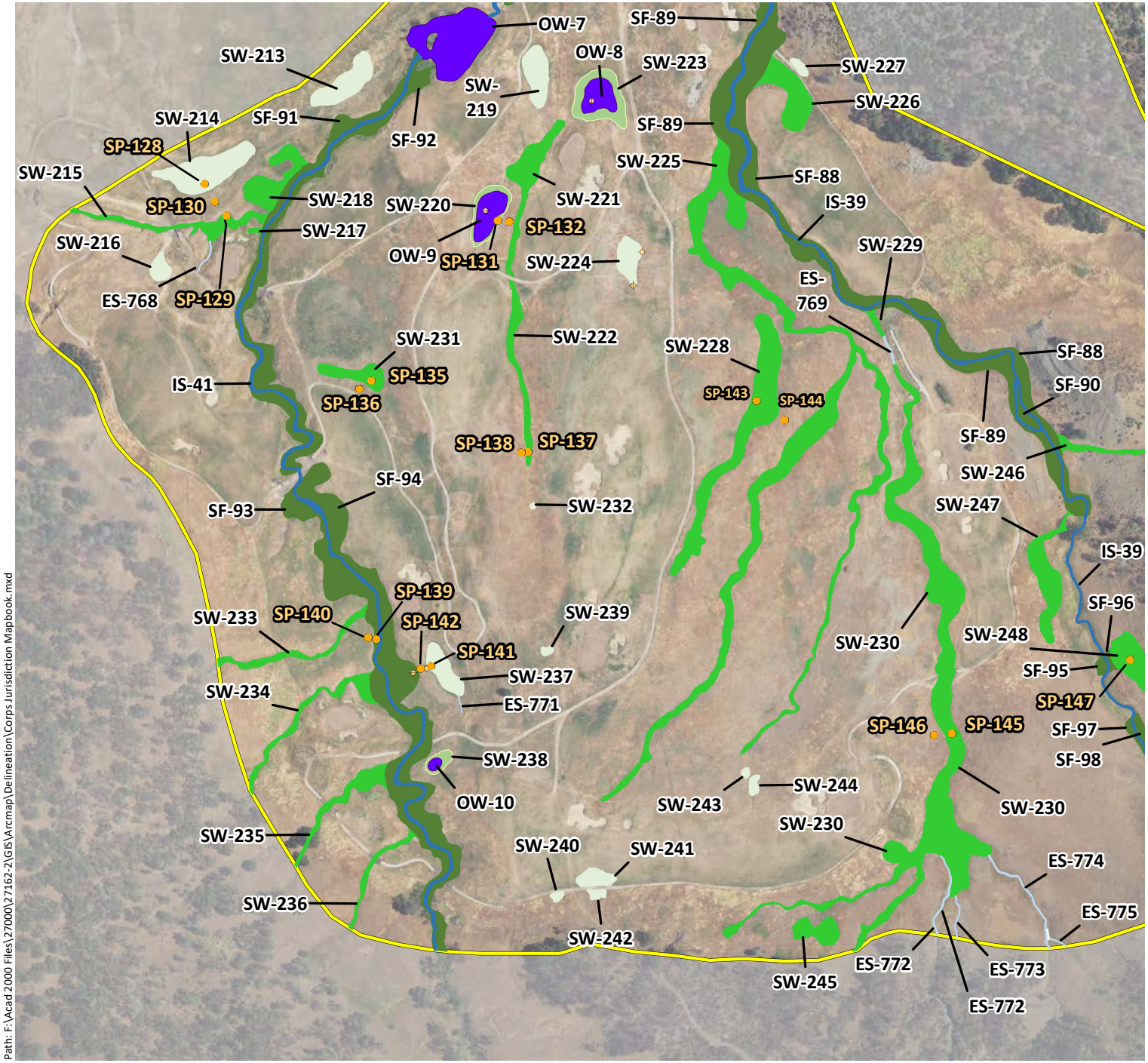
Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 58)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

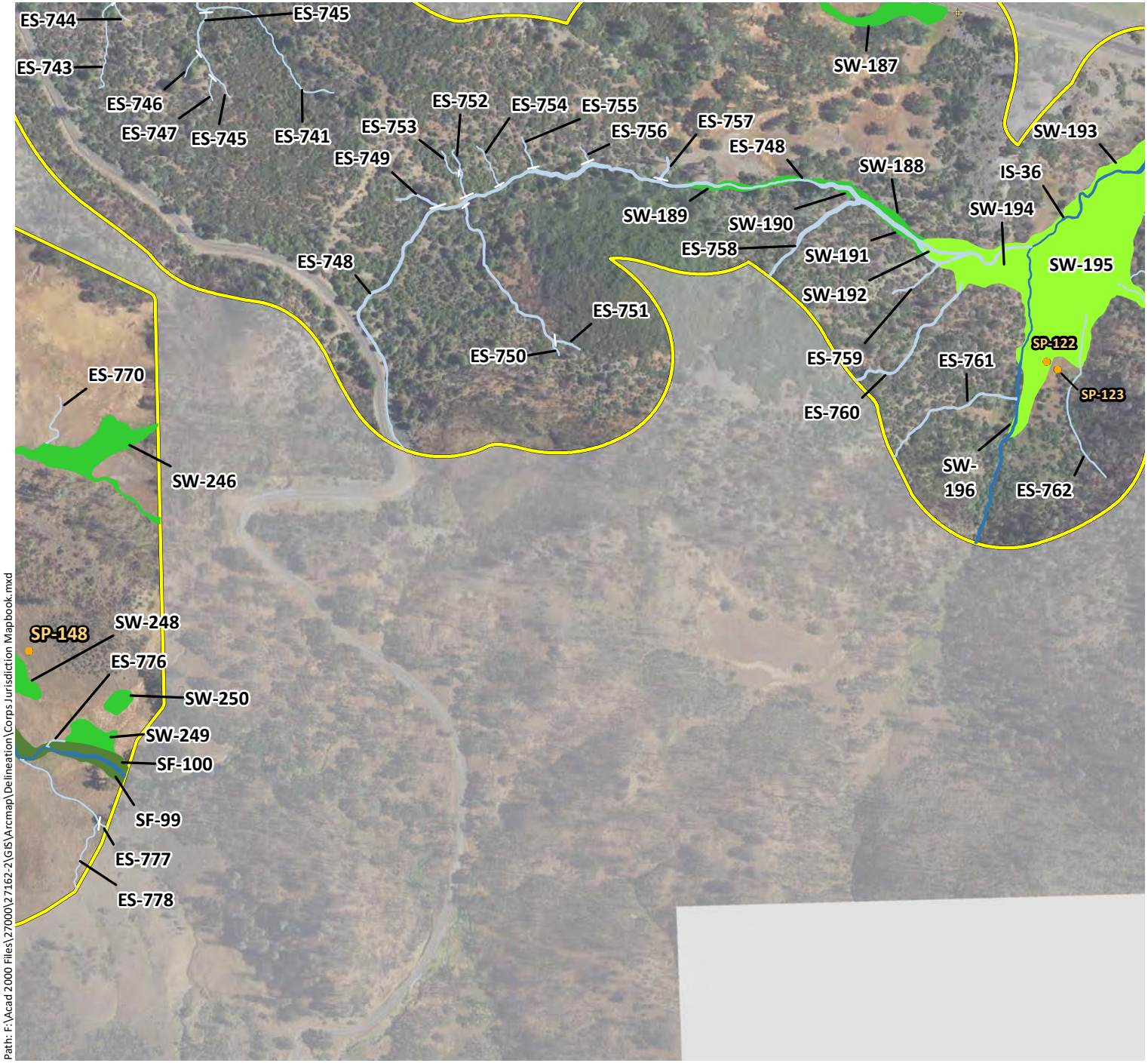
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 59)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 60)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

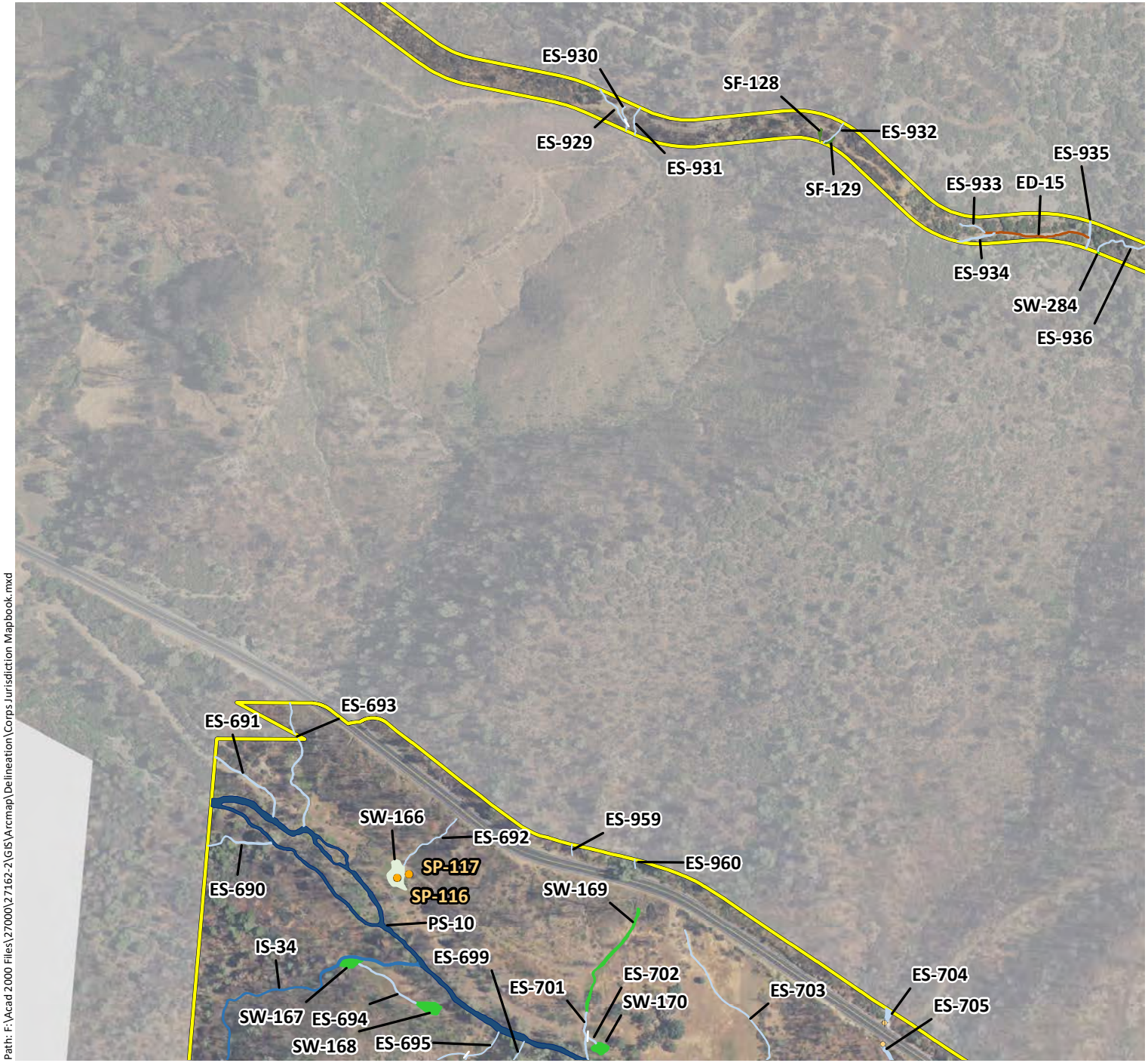
wra
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 61)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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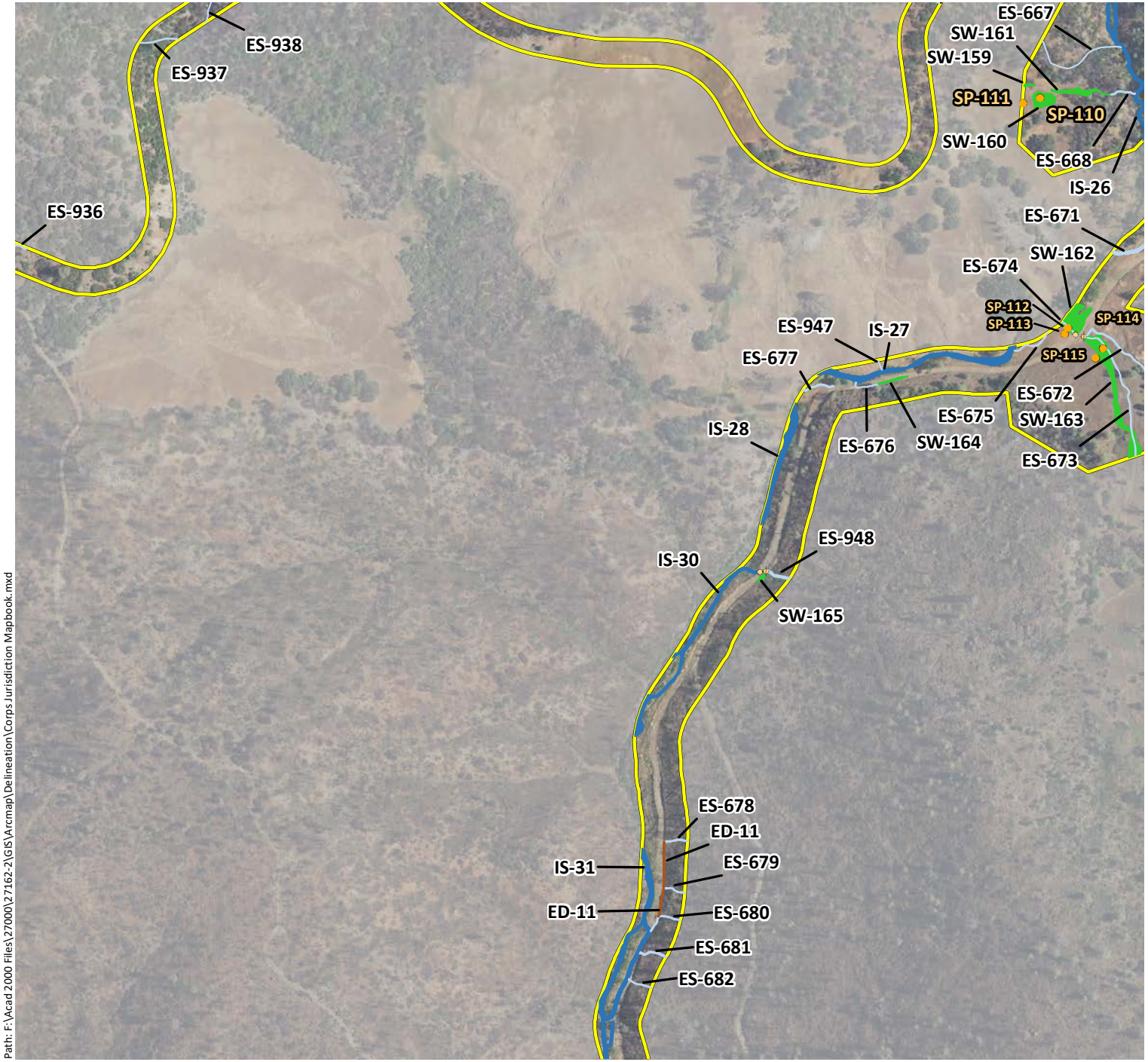
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020



Appendix B. Potential Waters of the United States (Mapbook Sheet 62)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

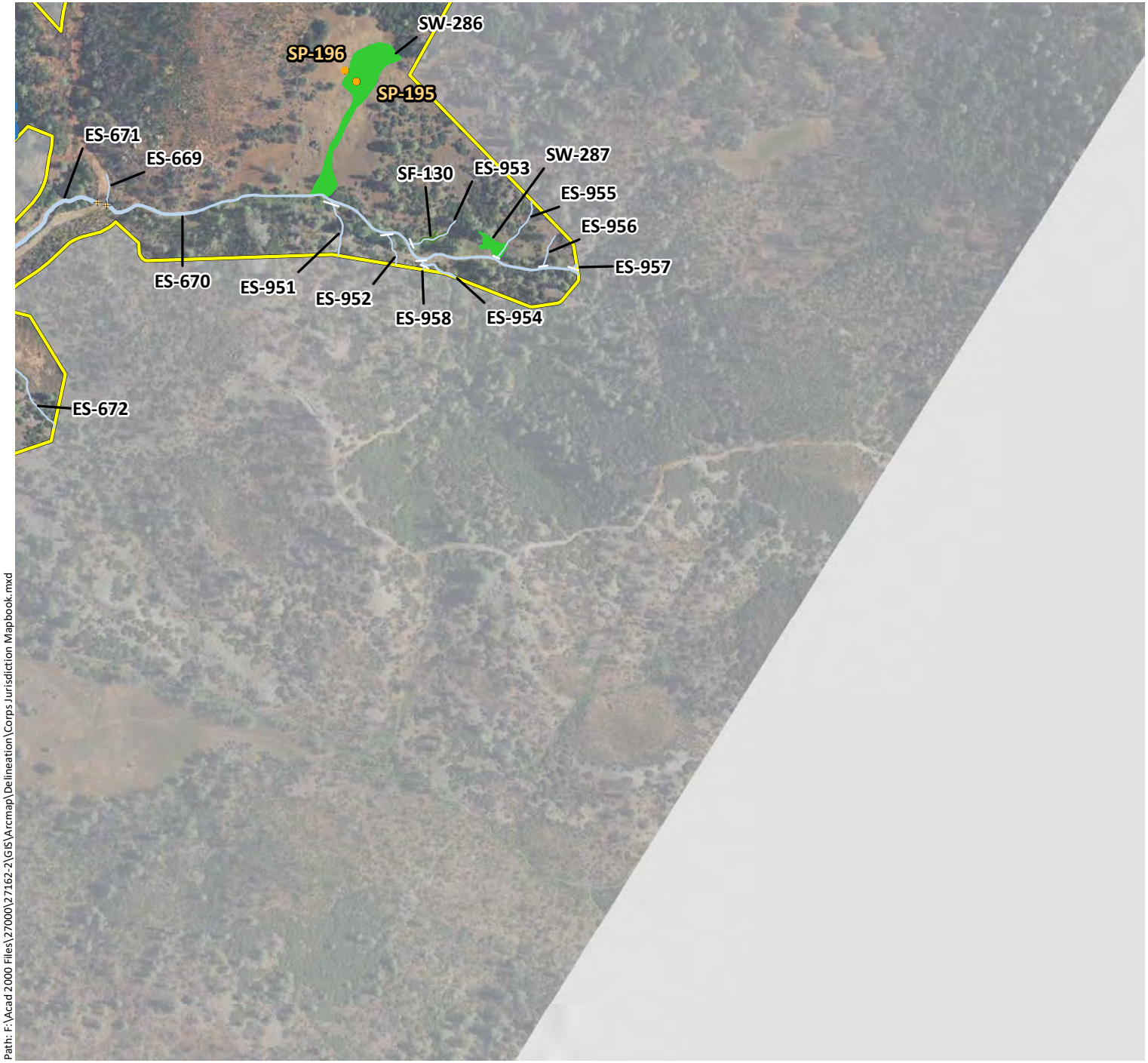
wra ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 63)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
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- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

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ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B. Potential Waters of the United States (Mapbook Sheet 64)

Maha Resort and Guenoc Valley Development, Phase 1

Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

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Feet

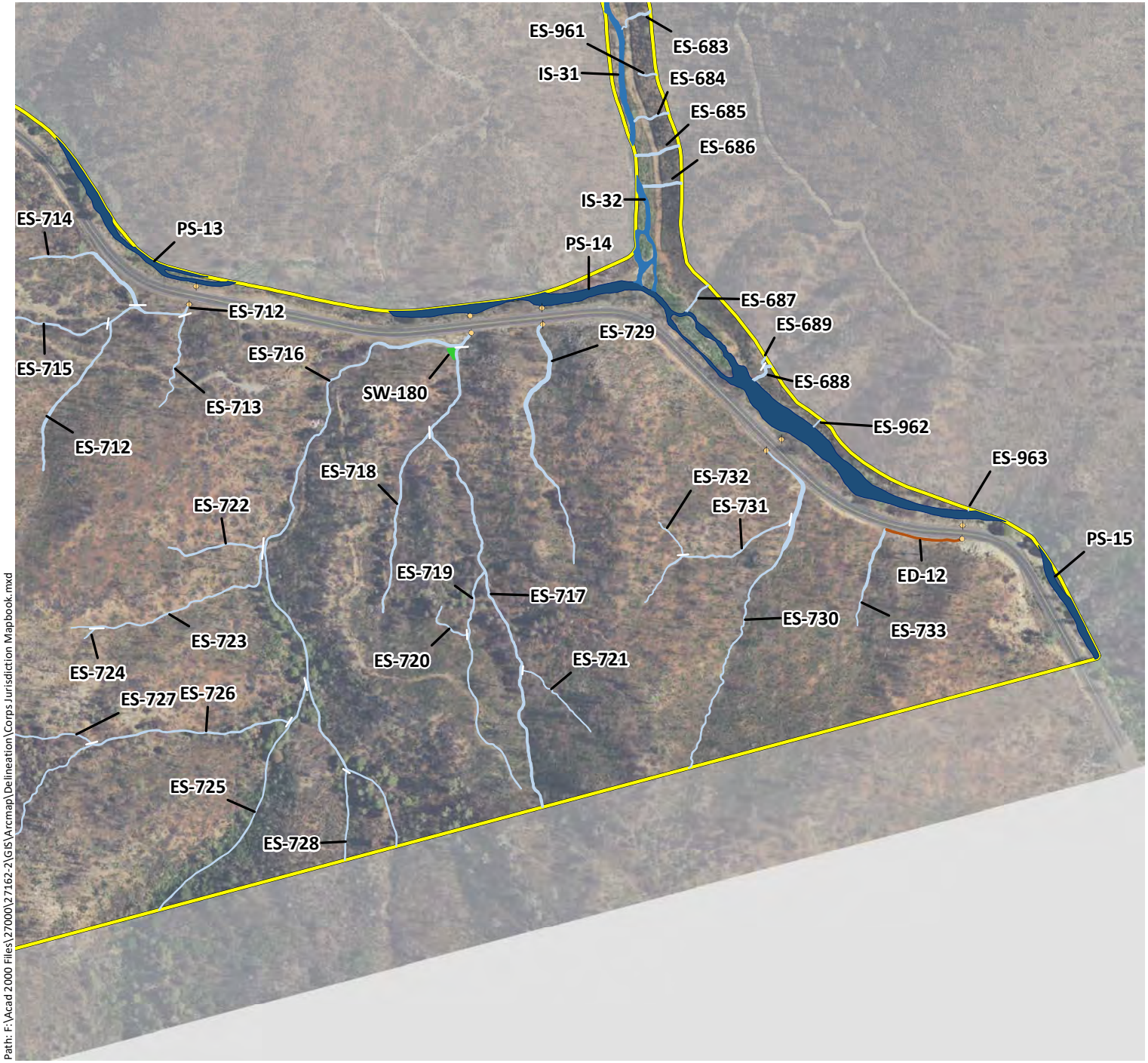
wra ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

Appendix B.
Potential Waters of the United States (Mapbook Sheet 65)

Maha Resort and Guenoc Valley Development, Phase 1



Phase 1 Study Area - 5,350 ac.

Sample Points

Culverts

Potential Jurisdictional Wetlands

- Forested Wetlands (FW) - PFO1E
- Scrub-Shrub Wetlands (SS) - PSS1C
- Seasonal Wetland Depressions (SW) - PEM2C
- Seasonal Wetland Ditches (SW) - PEM2Cx
- Seasonal Wetland Pond Fringes (SW) - PEM1/2C
- Seasonal Wetland Seeps/Swales (SW) - PEM2C
- Seasonal Wetland Wet Meadows (SW) - PEM2C
- Stream Fringe/In-Stream Wetlands (SF) - R4SB7

Potential Jurisdictional Waters

- Ephemeral Ditches (ED) - R4SBA/Cx
- Ephemeral Streams (ES) - R4SBA
- Intermittent Streams (IS) - R4SBC
- Perennial Streams (PS) - R5UBF/H
- Open Waters (OW) - PUBK

N

0 250 500

Feet

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ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\Delineation\Corps Jurisdiction Mapbook.mxd

Sources: 2016 Hexagon Aerial, Lake County Lidar, WRA | Prepared By: mrochelle, 1/8/2020

APPENDIX C

WETLAND DETERMINATION DATA FORMS

DRAFT

DRAFT

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-01**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775905 Long: -122.468045 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point taken in wetland stream fringe associated with perennial stream. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changes in topography and vegetation. Paired with upland sample point SP-02.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Juncus mexicanus*	20	Y	FACW
2. *Cynodon dactylon*	30	Y	FACU
3. *Eleocharis macrostachya*	10		OBL
4. *Schoenoplectus acutus*	10		OBL
5. *Carex sp.*	5		
6. *Cyperus eragrostis*	5		FACW
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species	20	x1	20
FACW species	25	x2	50
FAC species		x3	
FACU species	30	x4	120
UPL species		x5	
Column Totals	75 (A)		190 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%
☒ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Thatch=10; Vegetation meets Prevalence Index.

SOIL

Sampling Point SP-01

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	5B 2.5/0	95	7.5YR 4/6	5	C	M, PL	Sandy clay	Very gritty with many small pebbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☒ Yes ☐ No Depth (inches): 15"

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-15

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Primary hydrology indicator Saturation (A3) was observed with saturation throughout the profile with an associated water table at 15 inches in depth. One secondary indicator, Saturation Visible on Aerial Imagery (C9), also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-02**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) convex Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.746333 Long: -122.486211 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-01. Sample point located in upland on alluvial plain associated with perennial stream. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Avena barbata*	26	Y	UPL
2. *Hypochaeris glabra*	5		UPL
3. *Bromus diandrus*	10		UPL
4. *Trifolium hirtum*	15	Y	UPL
5. *Bromus hordeaceous*	15	Y	FACU
6. *Trifolium glomeratum*	5		UPL
7. *Leontodon saxatili ssp. longirostris*	3		FACU
8. *Carduus pycnocephalus*	1		UPL
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-02

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 4" due to rock layer. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-03**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 7-10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.771374 Long: -122.455304 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seasonal wetland near ridgeline. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to be hydric. Wetland boundary based on shift in vegetation and topography. Paired with SP-04.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5'r			
1. *Eleocharis acicularis*	50	Yes	OBL
2. *Festuca perennis*	20	Yes	FAC
3. *Festuca arundinaceae*	20	Yes	FACU
4. *Trifolium repens*	5		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 67 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-03

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	N2.5/0	100					Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 0.5

Water table present? ☒ Yes ☐ No Depth (inches): 12

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Primary hydrology indicators of Surface Water (A1), High Water Table (A2), and Saturation (A3) observed. Surface water was approximately 0.5 inches in depth and a water table was observed to 12 inches below ground.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-04**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.771418 Long: -122.455186 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-03; Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceous*	30	Y	FACU
2. *Avena barbata*	25	Y	UPL
3. *Festuca perennis*	15		UPL
4. *Acmispon wrangelianus*	8		UPL
5. *Holocarpha virgata ssp. virgata*	8		UPL
6. *Medicago polymorpha*	3		FACU
7.			
8.			
Herb Stratum Total Cover:	89		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 11 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-04

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 3/1	100					Clay	No redox features

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: High rock/ pebble content throughout profile. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-05**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) none Slope(%) 10-15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7704349144 Long: -122.453907737 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-06. Sample point located in wetland swale at base of ephemeral stream. Sample point met wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit. Sample Point SP-05 occurs in a hillside seep.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Eleocharis acicularis*	50	Yes	OBL
2. *Stachys albens*	20	Yes	OBL
3. *Polypogon monspeliensis*	5		FACW
4. *Juncus mexicanus*	1		FACW
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	76		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 24 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? (2/2)= 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: There is a dominance of hydrophytic vegetation present within the sampled area.

SOIL

Sampling Point SP-05

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-1	7.5YR 3/2	100					Loam	High organics
1-12	10Y 3/1	98	7.5YR 3/2	2	C	PL	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soils episaturated to 12 inches below the surface; no water table observed below. Soils meet Surface Water (A1) and Saturation (A3) indicators.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-06**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 10-15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7704309067 Long: -122.453980833 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-05. Sample point located in uplands adjacent to seasonal wetland along ephemeral stream. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	30	Yes	FACU
2. *Avena barbata*	20	Yes	UPL
3. *Melilotus indicus*	20	Yes	FACU
4. *Acmispon americanus*	10		UPL
5. *Elymus caput-medusae*	10		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: There is a dominance of non-hydrophytic vegetation present within the sampled area.

SOIL

Sampling Point SP-06

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 2.5/1	100					Clay Loam	Small cobble present.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil within the sampled point did not display any hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: There were no hydrology indicators present within sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-07**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 18

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7707244703 Long: -122.447519266 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands along hillslope near ridgeline. Sample point did not meet wetland indicators for hydrophytic vegetation and wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Hordeum marinum*	40	Yes	FAC
2. *Bromus hordeaceus*	25	Yes	FACU
3. *Festuca perennis*	15		FAC
4. *Avena barbata*	15		UPL
5. *Lupidium nitidum*	3		FAC
6. *Holocarpha lagomorpha*	2		UPL
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-07

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	10YR 3/1	95	7.5YR 3/4	5	C	M	Clay loam	
5-7	10YR 3/1	100					Clay loam	Many large cobbles.
7-9	7.5YR 3/4	100					Loamy sand	
9-12	10YR 2/1	10					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Secondary indicator of Saturation Visible on Aerial Imagery (C9) indicator is met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-08**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7701840215 Long: -122.446623048 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-09. Sample point located in a seasonal wetland along a hillslope. Sample point met wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Festuca perennis*	25	Yes	FAC
2. *Bromus hordeaceus*	20	Yes	FACU
3. *Hordeum marinum*	20	Yes	FAC
4. *Medicago polymorpha*	10		UPL
5. *Avena barbata*	10		UPL
6. *Stipa pulchra*	5		UPL
7. *Rumex crispus*	5		FAC
8. *Bromus diandrus*	5		UPL
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 66 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-08

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	5Y 3/1	97	7.5YR 3/4	3	C	M/PL/R	Loamy clay	
5-12	5Y 4/1	95	7.5YR 3/4	5	C	M	Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: The soil within sample point contains redox dark surface hydric indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): >9

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation wetland indicator is present.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-09**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7701580445 Long: -122.446570857 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-08. Sample point located in uplands adjacent to seasonal wetland along hillslope. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Medicago polymorpha*	30	Yes	UPL
2. *Bromus hordeaceus*	10	Yes	FACU
3. *Avena barbata*	10	Yes	UPL
4. *Hordeum marinum*	10	Yes	FAC
5. *Festuca perennis*	10	Yes	UPL
6. *Erodium brachycarpum*	5		UPL
7. *Elymus caput-medusae*	5		UPL
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 5 (B)

% of dominant species that are OBL, FACW, or FAC? 20 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-09

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	70					Clay loam	
0-12	10YR 3/2	30					Clay loam	non-redoximorphic mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: There were no hydrology indicators present within sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-10**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7688291341 Long: -122.450669174 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-11. Sample point located within seasonal wetland along a hillslope. Sample point met wetland indicators for hydrophytic vegetation and wetland hydrology. Soils problematic (serpentine, dark parent material), assumed hydric based on presence of hydrophytic vegetation and wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	40	Yes	FACU
2. *Juncus mexicanus*	20	Yes	FACW
3. *Hordeum marinum*	20	Yes	FAC
4. *Festuca perennis*	10		FAC
5. *Trifolium variegatum*	4		FAC
6. *Eleocharis acicularis*	4		OBL
7. *Juncus phaeocephalus*	1		FACW
8. *Lactuca saligna*	1		UPL
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 67 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present within the sampled area.

SOIL

Sampling Point SP-10

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/1	100					Clay Loam	Redox not present.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial wetland vegetation and presence of primary and secondary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Deep hoof marks observed at sample point, relative to adjacent areas, suggesting wetland hydrology present within the sampled area. Sample point meets Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-11**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 20.4763640066 Long: -122.450786664 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-10. Sample point located in uplands adjacent to seasonal wetland. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	25	Yes	FACU
2. *Festuca perennis*	20	Yes	FAC
3. *Avena barbata*	20	Yes	UPL
4. *Hordeum marinum*	15		FAC
5. *Acmispon americanus*	4		UPL
6. *Eleocharis acicularis*	4		OBL
7. *Juncus phaeocephalus*	1		FACW
8. *Lactuca saligna*			UPL
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation not present within the sampled area.

SOIL

Sampling Point SP-11

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/1	100					Clay Loam	Redox not apparent.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hoof prints shallower than in paired wetland point. No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-12**

Investigator(s) Aaron Arthur; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) none Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.767907904 Long: -122.450036164 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a vegetated swale with some open water. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Point paired with A-SP15.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Eleocharis acicularis*	40	Yes	OBL
2. *Juncus mexicanus*	10	Yes	FACW
3. *Avena barbata*	5		UPL
4. *Hordeum marinum*	5		FAC
5. *Bromus hordeaceus*	5		FACU
6. *Rumex crispus*	5		FAC
7. *Lactuca tatarica*	4		FAC
8. *Festuca perennis*	1		UPL
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 25 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-12

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	2.5Y 3/1	95	7.5YR 3/4	5	C	RC,M	Loamy clay	
8-12	2.5Y 3/1	98	7.5YR 3/4	2	C	M	Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point contains redox dark surface hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☐ No Depth (inches):

Water table present? ☐ Yes ☐ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-3

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains saturation, but no water table below, and oxidized rhizospheres along living roots wetland hydrology indicators.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-13**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7678753229 Long: -122.450103425 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit. Paired with SP-14.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	60	Yes	UPL
2. *Medicago polymorpha*	10		FACU
3. *Erodium cicutarium*	10		UPL
4. *Trifolium dubium*	5		UPL
5. *Holocarpha lagomorpha*	5		UPL
6. *Rumex crispus*	5		FAC
7. *Hordium murinum*	1		UPL
8.			
Herb Stratum Total Cover:	96		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: N/A			

% Bare ground in herb stratum 4 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-13

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 3/2	98	7.5YR 3/4	2	C	M	Loamy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample point does not contain hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not contain wetland hydrology indicators.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-14**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 7

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7687582478 Long: -122.44759631 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-13. Sample point located in seasonal wetland along hillslope. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Eleocharis acicularis*	30	Yes	OBL
2. *Hordeum marinum*	20	Yes	FAC
3. *Bromus hordeaceus*	10		FACU
4. *Festuca perennis*	5		FAC
5. *Juncus mexicanus*	5		FACW
6. *Trifolium dubium*	2		UPL
7. *Mimulus guttatus*	1		OBL
8.			
Herb Stratum Total Cover:	73		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 27 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present within the sampled area.

SOIL

Sampling Point SP-14

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	7.5YR 2.5/1	100					Loamy Clay	
4-12	N2.5/0	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 1

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-1

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water present within sample point. Soils saturated but no water table below. Sample point meets Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-15**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 7

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7687729712 Long: -122.447521016 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes. NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-14. Sample point located in uplands adjacent to seasonal wetland on hillslope. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Bromus hordeaceus*	20	Yes	FACU
2. *Medicago polymorpha*	10	Yes	FAC
3. *Hordeum marinum*	5		FAC
4. *Festuca perennis*	5		FAC
5. *Erodium brachycarpum*	5		UPL
6. *Microseris douglasii*	5		FACU
7.			
8.			
Herb Stratum Total Cover:	50		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 50 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-15

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 3/1	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-16**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 20

Subregion(LRR) LRR C (Medit. CA) Lat: 38.765903 Long: -122.440886 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-17. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Soils are problematic (serpentine) due to dark parent material, however hydric soil indicator A4 was observed. Boundary determined by change in topography and vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Eleocharis macrostachya*	60	Y	OBL
2. *Epilobium ciliatum*	10		FACW
3. *Juncus phaeocephalus var. phaeocephalus*	5		FACW
4. *Melilotus indicus*	+		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Bare ground= standing water; Vegetation meets dominance test.

SOIL

Sampling Point SP-16

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	N3/0	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox, however Hydric soil indicator Hydrogen Sulfide (A4) was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☒ Yes ☐ No Depth (inches): 0

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hydrology fed by spring uphill. Hydrology indicators Surface Water (A1), High Water Table (A2), and Saturation (A3) were observed. Surface water was observed, approximately 2 inches in depth.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-17**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 30

Subregion(LRR) LRR C (Medit. CA) Lat: 38.766003 Long: -122.440799 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-16. Sample point located in upland adjacent to seep. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Pinus sabiniana*	10	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	10		
SAPLING/SHRUB STRATUM **Plot Size:** 15' radius			
1. *Arctostaphylos manzanita ssp. manzanita*	10	Y	UPL
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	10		
HERB STRATUM **Plot Size:** 5' radius			
1. *Avena fatua*	30	Y	UPL
2. *Bromus hordeaceous*	12		FACU
3. *Medicago polymorpha*	15	Y	FACU
4. *Trifolium hirtum*	5		UPL
5. *Bromus madritensis*	5		
6. *Erodium cicutarium*	1		
7.			
8.			
Herb Stratum Total Cover:	68		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 32 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-17

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-7	10YR 3/2	50					clay	
	10YR 2/2	50					clay	
7-13	5Y 4/2	50					clay loam	
	2.5Y 4/2	50					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed. Numerous pebbles observed within the profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-18**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) Concave Slope(%) 5-10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7686941966 Long: -122.433752364 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-19. Sample point located on perennial stream fringe. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' r			
1. *Festuca perennis*	50	Yes	FAC
2. *Bromus hordeaceus*	15		FACU
3. *Geranium dissectum*	15		UPL
4. *Hordeum marinum*	10		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 90			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-18

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	10YR 3/2	60	10YR 4/1	40	D	RC/PL	Loam	
8-12	10YR 4/1	60	7.5YR 3/4	5	C	PL	Loam	
8-12	10YR 3/2	35						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☒ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample pointcontains Depleted Matrix (F3) and Depleted Dark Surface (F7) hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☒ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains drift deposits and aerial imagery secondary hydrology indicators.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-19**

Investigator(s) Aaron Arthur; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) Concave Slope(%) 3-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7687293542 Long: -122.43377786 Datum: D_WGS_1984

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to perennial stream fringe. Paired point with SP-18. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 30' r	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	40		
2.			
3.			
4.			
Tree Stratum Total Cover:	40		
SAPLING/SHRUB STRATUM Plot Size: 10'r			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' r			
1. *Bromus diandrus*	30	Yes	UPL
2. *Bromus hordeaceus*	20	Yes	FACU
3. *Avena barbata*	20	Yes	UPL
4. *Hordeum marinum*	10		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-19

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 3/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-20**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76606 Long: -122.430902 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-21. Sample point located in wetland swale at base of ephemeral stream on hillslope. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to be hydric. Boundary determined by changing topography and vegetation.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Carex serratodens*	65	Y	FACW
2. *Elymus triticoides*	20	Y	FAC
3. *Unknown Asteraceae*	2		
4. *Bromus diandrus*	5		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	92		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Thatch=8

SOIL

Sampling Point SP-20

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-14	10YR 2/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on topography, dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Inundation Visible on Aerial Imagery (B7) primary hydrology indicator observed. Saturation Visible on Aerial Imagery (C9) also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-21**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 5-10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.766054 Long: -122.431031 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-20. Sample point located in uplands adjacent to wetland swale at base of ephemeral stream on hillslope.Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Pinus sabiniana*	5	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	5		
SAPLING/SHRUB STRATUM **Plot Size:** 15' radius			
1. *Heteromeles arbutifolia*	25	Y	UPL
2. *Quercus durata var. durata*	5		UPL
3. *Rhus aromatica*	3		FACU
4. *Quercus berberidifolia*	2		UPL
Sapling/Shrub Stratum Total Cover:	35		
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca californica*	30	Y	FACU
2. *Achillea millefolium*	25	Y	FACU
3. *Sisyrinchium bellum*	5		FACW
4. *Ranunculus occidentalis var. occidentalis*	10		FAC
5. *Plantago erecta*	10		UPL
6. *Aira caryophyllea*	10		FACU
7. *Leptosiphon parviflorus*	+		
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Thatch=5; Vegetation does not meet dominance test.

SOIL

Sampling Point SP-21

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-14	10YR 2/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-22**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.764093 Long: -122.466203 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paried points with SP-23. Sample point located at head of wetland swale in blue oak savannah. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary determined based on shift in topography and vegetation composition.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Hordeum marinum*	70	Y	FAC
2. *Bromus hordeaceaous*	10		FACU
3. *Hypochaeris radicata*	5		FACU
4. *Trifolium willdenovii*	2		FACW
5. *Festuca bromoides*	2		FACU
6. *Erodium brachycarpum*	+		
7.			
8.			
Herb Stratum Total Cover:	89		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 11 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-22

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	7.5YR 3/2	90	5YR 3/4	10	C	PL, M	sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: hard pan

Depth (inches): 10

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hydrology indicators of Water-Stained Leaves (B9) and Drainage Patterns (B10) were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-23**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%)

Subregion(LRR) LRR C (Medit. CA) Lat: 38.764313 Long: -122.466205 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-22. Sample point located in uplands adjacent to wetland swale in blue oak savannah. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Qud ou*	25	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	25		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Avena barbata*	40	Y	UPL
2. *Bromus hordeaceous*	15	Y	FACU
3. *Medicago polymorpha*	+		FACU
4. *Hypochaeris glabrata*	5		UPL
5. *Geranium dissectum*	5		UPL
6. *Briza minor*	+		FAC
7. *Trifolium willdenovii*	1		FACW
8. *Anthemis cotula*	3		FACU
Herb Stratum Total Cover:	69		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 31 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-23

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5 YR 3/3	98	5YR 3/4	2	C	PL	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-24**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.763979 Long: -122.461894 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in small linear wetland swale. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changes in topography and vegetation. Paired point with SP-25.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	50	Y	FAC
2. *Bromus hordeaceous*	10		FACU
3. *Elymus caput-medusae*	5		NL
4. *Lasthenia californica ssp. californica*	5		UPL
5. *Hypochaeris glabra*	3		NL
6. *Navaretia sp.*	2		-
7.			
8.			
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-24

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	7.5YR 2.5/3	85	5YR 4/6	15	C	PL/M/RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 3-4"

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-25**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) None Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.764039 Long: -122.461812 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to small wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-24.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Bromus hordeaceous*	40	Y	FACU
2. *Bromus diandrus*	20	Y	UPL
3. *Elymus caput-medusae*	10		NL
4. *Avena barbata*	10		UPL
5. *Erodium cicutarium*	8		UPL
6. *Gastridium phleoides*	5		FACU
7. *Lasthenia californica ssp. californica*	2		UPL
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-25

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	7.5YR 3.5/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 4"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-26**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761932 Long: -122.457605 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located within narrow wetland swale in a large topographic bowl. Paired point with SP-27. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	40	Y	FAC
2. *Perideridia kelloggii*	5		NL
3. *Trifolium willdenovii*	2		FACW
4. *Avena barbata*	3		UPL
5. *Elymus caput-medusae*	3		UPL
6. *Briza minor*	2		FAC
7. *Eleocharis macrostachya*	2		OBL
8. *Bromus hordeaceous*	2		FACU
Herb Stratum Total Cover:	59		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 16 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: thatch= 20; algal matting= 5; Vegetation meets dominance test.

SOIL

Sampling Point SP-26

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	5YR 3/2	95	5YR 4/6	5	C	M, PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 3

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: High pebble content cause of shovel refusal. Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hydrology indicator Biotic Crust (B12) observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-27**

Investigator(s) Scott Yarger, Sammi Hill Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 1-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761928 Long: -122.45797 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in uplands adjacent to a narrow wetland swale in a large topographic bowl. Paired with SP-26. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Avena barbata*	20	Y	UPL
2. *Hypochaeris glabra*	25	Y	UPL
3. *Erodium botrys*	20	Y	FACU
4. *Bromus hordeaceous*	10		FACU
5. *Elymus caput-medusae*	5		UPL
6. *Acmispon americanus var. americanus*	5		UPL
7. *Trifolium willdenovii*	3		FACW
8. *Briza minor*	1		FAC
Herb Stratum Total Cover:	89		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 11 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-27

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	2.5YR 3/3	90	N2.5/0	10	C	M		manganese concretions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-28**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7640112615 Long: -122.443445854 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in large seasonal wetland in valley. Sample point did met wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Average rainfall conditions were documented during the site visit. Paired with SP-29.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:	N/A		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Hordeum marinum*	50	Yes	FAC
2. *Rumex crispus*	20	Yes	FAC
3. *Bromus hordeaceus*	10		FACU
4. *Trifolium repens*	5		FACU
5. *Hydrocotyle ranunculoides*	5		OBL
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-28

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	7.5YR 3/1	95	7.5YR 4/6	5	C	M/PL, RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point contains redox dark surface hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point met oxidized rhizospheres along living roots wetland hydrology indicators and met Secondary indicator of Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-29**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 2-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7639991455 Long: -122.443598811 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point did not meet wetland indicators for hydrophytic vegetation and wetland hydrology. Average rainfall conditions were documented during the site visit. Paired with SP-28.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:	N/A		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	50	Yes	FACU
2. *Trifolium dubium*	20	Yes	UPL
3. *Erodium brachycarpum*	10		UPL
4. *Geranium dissectum*	5		UPL
5. *Hordeum marinum*	5		FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-29

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 2.5/2	98	7.5YR 3/4	2	C	M/PL	Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point meets redox dark surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-30**

Investigator(s) Tanner Harris, Rhiannon Korhummel,WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76141 Long: -122.440617 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-31. Sample point located in a large seasonal wetland at terminus of intermittent stream along a valley floor. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca perennis*	30	Y	FAC
2. *Hordeum marinum*	30	Y	FAC
3. *Hemizonia congesta ssp. lutescens*	10		NL
4. *Trifolium fucatum*	10		FACU
5. *Medicago polymorpha*	5		FACU
6. *Lactuca serriola*	5		FACU
7. *Parentucellia viscosa*	5		FAC
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Thatch=5; Vegetation meets dominance test.

SOIL

Sampling Point SP-30

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 4/2	48	5YR 3/4	5	C	M, PL, RC	Clay loam	
	10YR 2/1	47						
4-12	10YR 2/1	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils with buried A horizon from sediment deposition from stream feeding wetland. Soils meet Depleted Matrix (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Saturation observed on March visit

Remarks: Soils meet Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-31**

Investigator(s) Tanner Harris, Rhiannon Korhummel,WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Valley floor Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761586 Long: -122.440507 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired points with SP-30. Sample point located in uplands adjacent to a large seasonal wetland along valley floor. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Medicago polymorpha*	30	Y	FACU
2. *Festuca perennis*	15	Y	FAC
3. *Bromus hordeaceous*	15	Y	FACU
4. *Vicia villosa ssp. villosa*	10		UPL
5. *Hemizonia congesta ssp. lutescens*	10		UPL
6. *Hordeum marinum*	10		FAC
7. *Lupinus bicolor*	+		UPL
8.			
Herb Stratum Total Cover: 95			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Thatch=5 percent; Vegetation does not meet dominance test.

SOIL

Sampling Point SP-31

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-11	10YR 2/1	100					Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-32**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.763114 Long: -122.439354 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland seep in draw on hillside . Boundary determined by shift in vegetation, and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Paired point with SP-33.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	20	Y	FAC
2. *Festuca perennis*	20	Y	FAC
3. *Eleocharis macrostachya*	15	Y	OBL
4. *Trifolium dubium*	10		UPL
5. *Lathyrus sp.*	10		
6. *Geranium dissectum*	10		UPL
7. *Juncus xiphioides*	5		OBL
8. *Bromus hordeaceous*	5		UPL
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch=5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-32

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 2/1	95	5YR 3/4	5	C	PL, M	Loamy sand	
4-12	10YR 2/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Saturation observed in March 2018.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-33**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 20

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76312 Long: -122.43943 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in adjacent uplands to seep in hillslope. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-32.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Avena barbata*	30	Y	UPL
2. *Bromus madritensis ssp. rubens*	20	Y	UPL
3. *Festuca microstachys*	10	Y	UPL
4. *Geranium dissectum*	5		UPL
5. *Erodium cicutarium*	5		UPL
6. *Plantago erecta*	3		NL
7. *Acmispon wrangelianus*	2		UPL
8. *Holocarpha virgata*	+		NL
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch=15 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: *Elymus caput-medusae (*UPL)= 10; Vegetation does not meet dominance test.

SOIL

Sampling Point SP-33

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-34**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) none Slope(%) 1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761486 Long: -122.431685 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point in stream channel with dominated by perennial vegetation. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Paired point with SP-35.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 10'			
1. *Juncus mexicanus*	45	Y	FACW
2. *Festuca perennis*	20	Y	FAC
3. *Hordeum marinum*	10		FAC
4. *Medicago polymorpha*	5		FACU
5. *Lactuca saligna*	+		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation heavily grazed. Vegetation meets dominance test.

SOIL

Sampling Point SP-34

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 3/2	85	10YR 3/6	5	C	PL, M,RC	Clay loam	
	2.5Y 2.5/1	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3) and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-35**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761547 Long: -122.431684 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Point taken in uplands above stream channel bank. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.Paired point with SP-34.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Avena barbata*	60	Y	UPL
2. *Bromus hordeaceous*	10		FACU
3. *Acmispon wrangelianus*	5		NL
4. *Elymus caput-medusae*	5		NL
5. *Medicago polymorpha*	+		FACU
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch=20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-35

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-17	10YR 2/1	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-36**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Slightly concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.763771 Long: -122.427948 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Seepy patch at bench along drainage; wetland boundary based on signatures. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Paired point with SP-37.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	20	Y	FAC
2. *Juncus mexicanus*	20	Y	FACW
3. *Festuca perennis*	20	Y	FAC
4. *Bromus hordeaceous*	10		FACU
5. *Hemizonia congesta ssp. lutescens*	+		NL
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch=30 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation heavily grazed. Vegetation meets dominance test.

SOIL

Sampling Point SP-36

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 3/2	98	10YR 3/6	2	C	M,RC	Clay loam	
6-12	10YR 3/2	75	10YR 3/6	25	C	M,RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6). Soil moist at sampling, but not saturated.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-37**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: Long: Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to wetland seep on hillslope . Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-36.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Avena barbata*	50	Y	UPL
2. *Bromus hordeaceous*	10		UPL
3. *Medicago polymorpha*	8		FACU
4. *Anagalis aravensis*	2		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: thatch=30; Vegetation does not meet dominance test.

SOIL

Sampling Point SP-37

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 2.5/2	100					CC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-38**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.763843 Long: -122.423679 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a concave wetland seep. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary is determined by shift in topography and vegetation. Paired point with SP-39.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Carex serratodens*	80	Y	FACW
2. *Melilotus indicus*	2		FACU
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 18 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-38

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	10Y 4/0	90	10YR 3/4	10	C	M	sandy clay loam	
4-16	10Y 4/0	60					sandy clay loam	fibrous roots
	10YR 4/2	40						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☒ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil meets Loamy Gleyed Matrix (F2).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 1

Water table present? ☒ Yes ☐ No Depth (inches): 9

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 6

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hydrology indicators of Surface Water (A1), High Water Table (A2), and Saturation (A3) were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-39**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76383 Long: -122.423657 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on upland convex slope adjacent to wetland. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired with SP-38.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Stipa pulchra*	65	Y	UPL
2. *Bromus hordeaceous*	30	Y	FACU
3. *Centaurea melitensis*	2		UPL
4. *Acmispon wrangelianus*	+		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	97		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 3 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-39

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 3/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/17/2018

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-40**

Investigator(s) Scott Yarger, Scott Batiuk, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.764453 Long: -122.420574 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a wetland seep on hillslope. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Sample point paired with SP-41. Rainfall was above average for time of year.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:**	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:**			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Carex serratodens*	80	Yes	FACW
2. *Stachys albens*	10		OBL
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:**			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 2 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Litter/thatch = 8%; Vegetation meets dominance test.

SOIL

Sampling Point SP-40

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-2	10YR 2/1	70	10YR 3/4	30	C	M	Loamy clay	
2-8	2.5Y 2.5/1	95	7.5YR 4/4	5	C	M	Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet redox dark surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-8

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point has saturated soils to 8 inches in depth, but no water table observed below. Sample point meets biotic crust (B12), saturation on aerial imagery (C9), and FAC-neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/17/2018

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-41**

Investigator(s) Scott Yarger, Scott Batiuk, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 50

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716602 Long: -122.464712 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is an upland sample point paired with wetland sample point SP-40. Sample point is located on a steep slope above and directly adjacent to a stream fringe wetland. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Rainfall was above average for time of year.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 15' radius			
1. *Eriodictyon californicum*	8	Yes	NL
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	8		
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	15	Yes	FACU
2. *Bromus madritensis*	15	Yes	UPL
3. *Centaurea melitensis*	5	No	NL
4. *Avena barbata*	2	No	NL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	37		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 63 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Sample point does not meet hydrophytic vegetation indicators.

SOIL

Sampling Point SP-41

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No wetland hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-42**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7578032497 Long: -122.46710315 Datum: D_WGS_1984

Soil Map Unit Name Water NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located within large vernal pool located in small valley. Sample point met wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Average rainfall conditions were documented during the site visit. Paired with SP-43.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:	N/A		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Trifolium variegatum*	30	Yes	FAC
2. *Bromus hordeaceus*	10	Yes	FACU
3. *Hordeum marinum*	10	Yes	FAC
4. *Eryngium artistulatum*	10	Yes	OBL
5. *Eleocharis acicularis*	7		OBL
6. *Triteleia latifolia*	2		UPL
7. *Hypochaeris radicata*	1		FACU
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 30 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 75 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-42

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	7.5YR 3/2	95	5YR 3/4	4	C	M/RC	Loam	Extreamly cobbly.
			N 2.5/0	1	C	M	Loam	Manganese

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets oxidized rhizospheres along living roots wetland hydrology indicators and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-43**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7579883075 Long: -122.467003876 Datum: D_WGS_1984

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to large vernal pool. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit. Paired with SP-42.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 30'r	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus douglasii*	10	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	10		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	40	Yes	FACU
2. *Erodium cicutarium*	15	Yes	UPL
3. *Avena barbata*	10		UPL
4. *Chlorogalum pomeridianum*	10		UPL
5. *Lasthenia gracilis*	5		UPL
6. *Trifolium willdenowii*	5		FACW
7. *Hypochaeris radicata*	5		FACU
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-43

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	5YR 3/3	100					Loam	Very cobbly.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Compacted rock

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soils assumed non-hydric based on lack of redox at 4 inches, as well as upland vegetation, and no wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-44**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.75879 Long: -122.45409 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in swale on gentle slope which feeds into stream downslope. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changes in topography and vegetation. Paired point with SP-45

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 4' x 5' radius			
1. *Hordeum marinum*	40	Y	FAC
2. *Festuca perennis*	10		FAC
3. *Bromus hordeaceous*	10		FACU
4. *Trifolium variegatum*	5		FAC
5. *Hypochaeris glabra*	3		NL
6. *Briza minor*	2		FAC
7. *Trifolium willdenovii*	+		FACW
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 30 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-44

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	7.5YR 2.5/5	90	7.5YR 4/6	10	C	PL, M, RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 3"

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-45**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) None Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.758841 Long: -122.454088 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-44.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 15' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus douglasii*	30	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	30		
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Bromus hordeaceous*	25	Y	FACU
2. *Avena barbata*	25	Y	UPL
3. *Carduus pycnocephalus*	10		NL
4. *Trifolium hirtum*	10		UPL
5. *Daucus pusillus*	5		NL
6. *Elymus caput-medusae*	5		NL
7. *Hypochaeris glabra*	3		NL
8. *Hordeum marinum*	2		FAC
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-45

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	7.5YR 2.5/3	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-46**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76087 Long: -122.448102 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 8 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a swale on a toe slope. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Paired point with SP-47.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 10'			
1. *Hordeum marinum*	25	Y	FAC
2. *Festuca perennis*	20	Y	FAC
3. *Trifolium subterraneum*	15		UPL
4. *Erodium cicutarium*	10		UPL
5. *Bromus hordeaceous*	5		FACU
6. *Eleocharis macrostachys*	3		OBL
7. *Bromus diandrus*	1		UPL
8. *Avena barbata*	1		UPL
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-46

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR2/1	90	5YR 3/4	10	C	PL/RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-47**

Investigator(s) Tanner Harris, Rhiannon Korhummel Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) None Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.760875 Long: -122.448032 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 8 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-46.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Bromus hordeaceous*	40	Y	FACU
2. *Avena barbata*	10	Y	UPL
3. *Navaretia squarrosa*	10	Y	FACU
4. *Trifolium hirtum*	10	Y	UPL
5. *Hordeum marinum*	5		FAC
6. *Erodium cicutarium*	5		UPL
7. *Festuca perennis*	5		FAC
8. *see remarks for remainder*	3		
Herb Stratum Total Cover:	92		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 8 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 0% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: *Stipa pulchra* (UPL)=3, *Hypochaeris glabra* (NL) = 1, *Erigeron canadensis* (FACU)= 1; Vegetation does not meet dominance test.

SOIL

Sampling Point SP-47

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12+	5YR 2.5/2	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-48**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.759779 Long: -122.447731 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point in wetland swale on bench in hillside drainage, stream above and below. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changes in topography and vegetation. Paired point with SP-49 .

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 4' x 10'			
1. *Hordeum marinum*	40	Y	FAC
2. *Festuca perennis*	10	Y	FAC
3. *Bromus hordeaceous*	10	Y	FACU
4. *Eleocharis macrostachys*	5		OBL
5. *Geranium dissectum*	5		UPL
6. *Briza minor*	5		FAC
7. *Rumex pulcher*	5		FAC
8. *see remarks for remainder*			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 66 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: *Daucus pusillus* = 3, *Carduus pycnocephala*=2; Vegetation meets dominance test.

SOIL

Sampling Point SP-48

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	70	5YR 3/4	20	C	M		
			5YR 4/6	10	C	PL, RC		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water (1-2") in stream above swale. Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-49**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 8

Subregion(LRR) LRR C (Medit. CA) Lat: 38.759823 Long: -122.447743 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point on hillslope adjacent to bench with wetland. Wetland boundary based on shift in vegetation and topography. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-48.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Avena barbata*	25	Y	UPL
2. *Bromus hordeaceous*	25	Y	UPL
3. *Elymus caput-medusae*	15	Y	UPL
4. *Trifolium dubium*	10		UPL
5. *Erodium cicutarium*	5		
6. *Daucus pusillus*	3		
7. *Lupinus bicolor*	1		UPL
8. *Hypochaeris glabra*	1		
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-49

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12+	10YR 3/3	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-50**

Investigator(s) Tanner Harris, Rhiannon Korhummel Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.758934 Long: -122.443914 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 8 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in wet meadow at toeslope and adjacent to perennial stream. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by topography, aerial signature and vegetation.Paired point with SP-51.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Glycyrrhiza lepidota*	40	Y	FAC
2. *Eleocharis macrostachya*	30	Y	OBL
3. *Rumex crispus*	10		FAC
4. *Festuca arundinacea*	5		FACU
5.	5		
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-50

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	5Y 2.5/1	80	5YR 3/4	20	C	PL, M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils saturated. Soils meet Redox Dark Surface (F6) indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2"

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12"

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Standing water in hoof prints (2"). Soils saturated, but no water table below.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-51**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Slope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.759002 Long: -122.44391 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 8 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point on slope adjacent to road. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-50.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Cynodon dactylon*	30	Y	FACU
2. *Bromus hordeaceous*	20	Y	FACU
3. *Hordeum marinum*	20	Y	FAC
4. *Avena barbata*	10		UPL
5. *Festuca perennis*	5		FAC
6. *Plantago lanceolata*	3		FAC
7. *Rumex pulcher*	2		FAC
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch=10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks:

SOIL

Sampling Point SP-51

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-52**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.755624 Long: -122.492422 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located along a toeslope. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-53. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Hordeum brachyantherum*	30	Y	FACW
2. *Deschampsia danthonioides*	20	Y	FACW
3. *Hordeum murinum*	10	N	FACU
4. *Polypogon monspeliensis*	10	N	FACW
5. *Ranunculus sp.*	10	N	
6. *Castilleja rubicundula*	5	N	UPL
7. *Juncus phaeocephalus*	5	N	FACW
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-52

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 2.5/1	100	-	-	-	-	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Area of sample point location contains very evident green features on aerial imagery during wet years. Two secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) indicators were met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-53**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) Hillside Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.755916 Long: -122.49227 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on an upland hillside. Sample does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-52. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Holocarpha virgata*	30	Y	NL
2. *Gastridium phleoides*	30	Y	FACW
3. *Bromus hordeaceus*	20	Y	FACU
4. *Festuca microstachys*	5	N	NL
5. *Plantago erecta*	2	N	NL
6. *Zeltnera muehlenbergii*	1	N	FAC
7. *Brodiaea elegans*	1	N	FACU
8.			
Herb Stratum Total Cover:	89		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 11 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominanted by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-53

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 3/2	100	-	-	-	-	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-54**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Toe slope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753909 Long: -122.493081 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seasonal wetland along toeslope. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with upland sample point SP-55. The boundary of the wetland area was based on area of exposed cobbles and a shift in vegetation.Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Juncus xiphioides*	25	Y	OBL
2. *Polypogon monspeliensis*	20	Y	FACW
3. *Bromus hordeaceus*	8	N	FACU
4. *Hordeum marinum*	5	N	FAC
5. *Hemizonia congesta ssp. lutescens*	2	N	NL
6. *Lactuca serriola*	+	N	FACU
7. *Avena barbata*	+	N	NL
8.			
Herb Stratum Total Cover:	60		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 40 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by OBL and FACW species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-54

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	10.5YR 3/2	97	7.5YR 4/6	3	C	PL/RC	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal/rock

Depth (inches): 6"

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point meets the description of Redox Dark Surface (F6) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface Soil Cracks (B6) and Oxidized Rhizospheres along Living Roots (C3) were observed and therefore sample point meets wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-55**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Toe slope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753739 Long: -122.493014 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to seasonal wetland along toeslope. Sample point does not meet wetland criteria for hydric soils, hydrophytic vegetation and wetland hydrology. Paired with wetland sample point SP-54. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	45	Y	FACU
2. *Hordeum marinum*	15	N	FAC
3. *Gastridium phleoides*	15	N	FACW
4. *Holocarpha virgata*	10	N	NL
5. *Navarretia jepsonii*	5	N	FACW
6. *Brodiaea elegens*	+	N	FACU
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-55

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	7.5YR 3/3	98	7.5YR 5/6	2	C	M	Loamy clay	w/ cobble

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 6"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-56**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.752977 Long: -122.493321 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in stream fringe wetland associated with a pernnial stream. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-57. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca arundinacea*	30	Y	FAC
2. *Lotus corniculatus*	30	Y	FAC
3. *Cynodon dactylon*	30	Y	FACU
4. *Juncus sp.*	5	N	FACU
5. *Trifolium repens*	3	N	FACU
6. *Taraxacum officinale*	2	N	FACU
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 67 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☒ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Festuca arundinacea growing in humocks to elevate above saturated soils--considered as morphological adaptation and species treated as FAC instead of FACU. SP-56 therefore meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-56

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-3	2.5Y 3/1	97	7.5YR 4/6	3	C	Pl/Rc/M	Clay	
3-5	7.5YR 4/2	95	7.5YR 5/4	5	C	Pl/Rc/M	Loamy silt	
5-7	7.5YR 3/1	97	7.5YR 4/4	3	C	Pl/Rc/M	Clay	
7-9	7.5YR 5/2	97	7.5YR 3/4	3	C	Pl/M	Loamy silt	w/ Cobble
9-14	10YR 3/1	95	7.5YR 4/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Floodplain soils with mulitple stratified layers, but doesnt meet texture (muck, mucky peats or peat) requirements. However, soils do meet Redox Dark Surface (F6) and Depleted Matrix (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized Rhizospheres along Living Roots (C3) was observed. Also Saturation Visible on Aerial Imagery (C9) was observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-57**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753042 Long: -122.493433 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in upland adjacent to stream fringe wetland associated with a pernnial stream. Sample point does not meet wetland criteria for hydrophytic vegetation and wetland hydrology. Soils met Depleted Matrix (F3) hydric soil indicator. Paired with wetland sample point SP-56. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	30	Y	FACU
2. *Centaurea solstitialis*	30	Y	UPL
3. *Phalaris aquatica*	20	Y	FACU
4. *Elymus caput-medusae*	10	N	UPL
5. *Festuca perennis*	5	N	FAC
6. *Taraxacum officinale*	3	N	FACU
7. *Trifolium repens*	2	N	FACU
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-57

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR 4/1	55	7.5YR 4/6	5	C	M	Loamy clay	
	10YR 4/2	40						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Depleted Matrix (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-58**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.752733 Long: -122.477431 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a flat seasonal stream fringe. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-59. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 10' radius			
1. *Fraxinus latifolia*	5	Y	FACW
2. *Rubus armeniacus*	5	Y	FAC
3.			
4.			
Sapling/Shrub Stratum Total Cover:	10		
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	70	Y	FAC
2. *Eleocharis macrostachya*	10	N	OBL
3. *Typha angustifolia*	10	N	OBL
4. *Xanthium strumarium*	1	N	FAC
5. *Lotus corniculatus*	1	N	FAC
6. *Festuca arundinacea*	1	N	FACU
7. *Carex serratodens*	1	N	FACW
8.			
Herb Stratum Total Cover:	94		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 4 % cover of biotic crust 2

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW and FAC species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-58

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-2	10YR 4/2	100	-	-	-	-	Sandy loam	
2-10	10 GY 3/0	90	7.5YR 2.5/3	10	C	PL	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: River cobble

Depth (inches): 10

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet the description of Redox Dark Surface (F6) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☒ Yes ☐ No Depth (inches): 7

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-6

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: High Water Table (A2) and Saturation (A3) were observed and therefore sample point meets wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-59**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) Convex Slope(%) 3-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.752703 Long: -122.477445 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on a upland river terrace. Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-58. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus douglasii*	10	Y	NL
2. *Quercus durata*	5	Y	NL
3.			
4.			
Tree Stratum Total Cover:	15		
SAPLING/SHRUB STRATUM **Plot Size:** 10' radius			
1. *Fraxinus latifolia*	10	Y	FACW
2. *Rubus armeniacus*	3	Y	FAC
3. *Rhus aromatica*	1	N	FACU
4. *Peritoma arborea*	1	N	NL
Sapling/Shrub Stratum Total Cover:	15		
HERB STRATUM **Plot Size:** 5' radius			
1. *Cynosurus echinatus*	50	Y	NL
2. *Artemisia douglasiana*	5	N	FAC
3. *Bromus carinatus*	3	N	NL
4. *Bromus hordeaceus*	3	N	FACU
5. *Elymus glaucus*	2	N	FACU
6. *Bromus diandrus*	+	N	NL
7. *Eriophyllum lanatum*	+	N	NL
8.			
Herb Stratum Total Cover:	63		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 37 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 5 (B)

% of dominant species that are OBL, FACW, or FAC? 40 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-59

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
1-12	10YR 3/2	100	-	-	-	-	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-60**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753124 Long: -122.476815 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a fringe wetland. Sample meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-61. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Hordeum marinum*	85	Y	FAC
2. *Rumex crispus*	5	N	FAC
3. *Rumex pulcher*	+	N	FAC
4. *Veronica anagalis-aquatica*	+	N	OBL
5. *Eleocharis macrostachya*	+	N	OBL
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by a FAC species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-60

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	5GY 3/0	90	7.5 3/4	10	C	PL	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-7

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation (A3) was observed and therefore sample point meets wetland criteria for hydrology. No water table was observed, but assumed. Standing water in low flow channel 10 feet away from sample point. FAC-Neutral Test (D5) indicator is also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-61**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753177 Long: -122.47682 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on a flat, compacted road bed above ordinary high water mark. Sample does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-60. Rainfall above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 10' radius			
1. *Quercus durata*	5	Y	NL
2. *Aesculus californica*	5	Y	NL
3.			
4.			
Sapling/Shrub Stratum Total Cover:	10		
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	20	Y	FAC
2. *Festuca perennis*	15	Y	FAC
3. *Bromus hordeaceus*	10	Y	FACU
4. *Acmispon americanus*	10	Y	UPL
5. *Cynodon dactylon*	10	Y	FACU
6. *Lotus corniculatus*	10	Y	FAC
7. *Festuca microstachys*	+	N	UPL
8.			
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 8 (B)

% of dominant species that are OBL, FACW, or FAC? 37.5 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-61

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-6	7.5YR 3/3	100	-	-	-	-	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample point does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-62**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Valley floor Local Relief (concave, convex, none) Concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7520005076 Long: -122.469191907 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seasonal wetland associated with perennial stream. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Wetland boundary based on shift in vegetation and topography. Average rainfall conditions were documented during the site visit. Paired with SP-63

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM Plot Size: 5' r			
1. *Horduem marinum*	30	Yes	FAC
2. *Trifolium variegatum*	15	Yes	FAC
3. *Bromus hordeaceus*	15	Yes	FACU
4. *Festuca perennis*	10		FAC
5. *Eleocharis macrostachya*	10		FACW
6. *Mimulus guttatus*	5		OBL
7. *Lactuca tatarica*	3		FAC
8.			
Herb Stratum Total Cover:	88		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 12 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 66 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-62

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-8	2.5Y 3/1	95					Loamy clay	
0-8	10YR 3/2	5					Loamy clay	
8-12	2.5YR 3/1	100					Loamy clay	Extreamly cobbly.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-3

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soils were saturated to 3 inches but no water table was observed below. Sample point meets both Secondary hydrology indicators Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-63**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Valley Local Relief (concave, convex, none) Convex Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.751992 Long: -122.469292 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to perennial stream with fringe wetland, below main ranch road. Paired points with SP-62; Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceous*	45	Y	UPL
2. *Centaurea solstitialis*	10		UPL
3. *Trifolium dubium*	10		UPL
4. *Trifolium subterraneum*	8		UPL
5. *Hordeum marinum*	5		FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	78		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 22 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-63

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	10YR 3/2	100					clay loam	high pebble content

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 4 inches due to high pebble content. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-64**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 3-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7550131362 Long: --122.462761441 Datum: D_WGS_1984

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located within narrow wetland swale along valley. Sample point met wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Average rainfall conditions were documented during the site visit. Paired with A-SP21.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Eleocharis acicularis*	60	Yes	OBL
2. *Hordeum marinum*	10		FAC
3. *Stipa pulchra*	10		UPL
4. *Trifolium hirtum*	10		UPL
5. *Bromus hordeaceus*	5		FACU
6. *Medicago polymorpha*	5		FACU
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-64

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR 4/2	95	7.5YR 4/6	5	C	PL/M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/2/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-65**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 7-10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7549415502 Long: -122.462762401 Datum: D_WGS_1984

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to narrow wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired with A-SP20.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	30	Yes	FACU
2. *Trifolium hirtum*	20	Yes	UPL
3. *Acmispon wrangelianus*	10		UPL
4. *Avena barbata*	10		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 30 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-65

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 4/3	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-66**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753736 Long: -122.440978 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-67. Sample point located in a large wetland swale along a small valley. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic due to restrictive layer and red parent material potentially maksing redox; soils assumed to be hydric. Boundary determined by elevation changes and vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum brachyantherum*	20	Y	FACW
2. *Hordeum marinum*	15	Y	FAC
3. *Festuca perennis*	10		FAC
4. *Perideridia kelloggii*	4		NL
5. *Bromus hordeaceous*	2		OBL
6. *Petrorhagia dubia*	2		NL
7. *Holocarpha virgata ssp. virgata*	+		UPL
8. *Ranunculus occidentalis var. occidentalis*	+		FAC
Herb Stratum Total Cover:	53		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 47 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-66

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	5YR 3/2	100					clay loam	High pebble content, large boulders

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Shovel refusal at 4 inches due to high pebble content and buried rocks. Seasonally ponded feature over shallow restrictive layer (rocks/ hardpan) and red parent material likely masking possible redox. Soils presumed hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Primary hydrology indicator of Biotic Crust (B12) observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-67**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) convex Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753821 Long: -122.44095 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-66. Sample point located in upland adjacent to a large wetland swale along a small valley. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Bromus hordeaceous*	60	Y	FACU
2. *Elymus caput-medusae*	10		UPL
3. *Erodium brachycarpum*	5		UPL
4. *Festuca perennis*	5		FAC
5. *Holocarpha virgata ssp. virgata*	3		UPL
6. *Avena barbata*	+		UPL
7.			
8.			
Herb Stratum Total Cover:	83		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 17 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-67

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	5YR 3/4	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 4 inches after several attempts at different sample points. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-68**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.752124 Long: -122.435751 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-69; Sample point taken within a wetland swale associated with ephemeral stream. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic due to restrictive layer and red parent material potentially maksing redox; soils assumed to be hydric. Boundary determined by elevation and vegetation changes.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum marinum*	20	Y	FAC
2. *Festuca perennis*	15	Y	FAC
3. *Polypogon maritimus*	15	Y	OBL
4. *Trifolium variegatum*	5		FAC
5. *Lythrum hyssopifolia*	5		OBL
6. *Hypochaeris radicata*	10		FACU
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 30 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-68

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	5YR 3/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Shovel refusal at 4 inches due to high pebble content and buried rocks. Seasonally ponded feature over shallow restrictive layer (rocks/ hardpan) and red parent material likely masking possible redox. Soils presumed hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soils saturated to the surface. Primary hydrology indicators of Saturation (A3) and Biotic Crust (B12), and secondary indicators of Drainage Patterns (B10) and FAC-Neutral Test (D5) observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-69**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.752085 Long: -122.435754 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Point paired with SP-68. Sample point taken in uplands adjacent to wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceous*	45	Y	FACU
2. *Epilobium barchycarpum*	10		UPL
3. *Festuca perennis*	10		FAC
4. *Hordeum marinum*	5		FAC
5. *Avena barbata*	5		UPL
6. *Holocarpha virgata ssp. virgata*	5		UPL
7. *Trifolium hirtum*	2		UPL
8. *Hypochaeis glabra*	2		UPL
Herb Stratum Total Cover:	84		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 16 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-69

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-7	5YR 3/2	95	N2.5/0	5	C	M	loam	high pebble content, manganese concretions
7-9	5YR 3/2	90	N2.5/0	10	C	M	loam	manganese concretions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: hard pan

Depth (inches): 9"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 9 inches due to high pebble content. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-70**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.750985 Long: -122.488072 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located on a wetland terrace adjacent to a stream and below top of bank (TOB), and meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-71. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Lotus corniculatus*	30	Y	FAC
2. *Cynodon dactylon*	20	Y	FACU
3. *Festuca perennis*	20	Y	FAC
4. *Hordeum marinum*	10	N	FAC
5. *Juncus xiphioides*	5	N	OBL
6. *Polypogon monspeliensis*	5	N	FACW
7. *Juncus sp.*	5	N	
8. *Rumex crispus*	4	N	FAC
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 66.7 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FAC and FACU species and meets wetland criteria for hydrophytic vegetation. The sample also contains trace amounts of *Xanthium strumarium* (FAC).

SOIL

Sampling Point SP-70

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	7.5YR 3/2	95	7.5YR 4/6	5	C	PL/RC/M	Loamy silt	
3-12	10YR 3/1	85	7.5YR 3/4	3	C	M/PL	Sandy clay loam	
			10Y 4/1	12	C	M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Sample point meets the description of Redox Dark Surface (F6) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☒ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized Rhizospheres along Living Roots (C3) were observed and therefore meets wetland criteria for hydrology. Secondary indicators Sediment Deposits (B2) and FAC-Neutral Test (D5) indicators were also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-71**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.751052 Long: -122.488083 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in uplands above top of bank. Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-70. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Elymus caput-medusae*	30	Y	UPL
2. *Bromus hordeaceus*	30	Y	FACU
3. *Festuca perennis*	15	N	FAC
4. *Bromus diandrus*	10	N	NL
5. *Cynodon dactylon*	5	N	FACU
6. *Centaurea solstitialis*	3	N	UPL
7. *Trifolium hirtum*	2	N	FACW
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-71

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	85	7.5YR 4/6	1	C	M	Clay loam	
	10YR 2/1	14					CLay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-72**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) Concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.749922 Long: -122.487343 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a wetland area. Sample meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Soils are problematic due to dark serpentine parent material or high organice matter masking redox, and assumed to by hydric. Paired with upland sample point A201. Wetland boundary was determined based on shifts in vegetation and topography.Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Polypogon monspeliensis*	20	Y	FACW
2. *Schoenoplectus acutus*	20	Y	OBL
3. *Elymus triticoides*	10	N	FAC
4. *Festuca perennis*	10	N	FAC
5. *Polygonum aviculare*	1	N	UPL
6. *Lactuca serriola*	1	N	FACU
7. *Rumex crispus*	1	N	FAC
8.			
Herb Stratum Total Cover:	63		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 37 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW and OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-72

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 2.5/1	99	5YR 3/4	1	C	M	Cobbly clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material and/or high organic material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point is located in a existing channel that shows evidence of flow. Surface Soil Cracks (B6) and Drainage Patterns (B10) hydrology indicators were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-73**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.749956 Long: -122.487379 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in along a channel side. Sample meets wetland criteria for hydrophytic vegetation, but does not meet wetland criteria for hydric soils and wetland hydrology. Paired with wetland sample point SP-72. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca perennis*	60	Y	FAC
2. *Centaurea solstitialis*	10	N	UPL
3. *Hordeum marinum*	4	N	FAC
4. *Lactuca serriola*	1	N	FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by a FAC species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-73

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	2.5Y 2.5/1	100	-	-	-	-	Cobbly clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-74**

Investigator(s) Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.751229 Long: -122.4649 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point paired with SP-75. Sample point located in perennial seep above road. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Festuca perennis*	30	Yes	FAC
2. *Hordeum marinum*	20	Yes	FAC
3. *Bromus hordeaceus*	20	Yes	FACU
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 70			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 30 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 67 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-74

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-3	10YR 3/2	90	7.5YR 3/4	10	C	PL/M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Substrate refusal

Depth (inches): 3

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soil within the sampled point displayed an hydric soil indicator of redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized rhizospheres along living roots indicator of wetland hydrology was present within the sampled area.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Middletown County Lake Sampling Date 8/28/2018

Applicant/Owner _____ State CA Sampling Point **SP-75**

Investigator(s) Rhiannon Korhummel, WRA, Inc. Section,Township,Range _____

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) _____ Slope(%) 0-5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.751283 Long: -122.46493 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-74. Sample point located in uplands adjacent to wetland. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 25' x 25'	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus douglasii*	15	Yes	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	15		
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Bromus hordeaceus*	40	Yes	FAC
2. *Bromus daindrus*	30	Yes	UPL
3. *Trifolium hirtum*	10		UPL
4. *Festuca perennis*	5		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-75

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	10YR 3/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 5

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil within the sampled point did not display a hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of wetland hydrology were present within the sampled area.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-76**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Valley Local Relief (concave, convex, none) Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.746333 Long: -122.486211 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seep on hillside below road. Standing water observed. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Boundary determined by changes in topography and vegetation. Paired point with SP-77.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Juncus mexicanus*	85	Y	FACW
2. *Festuca arundinacea*	5		FACU
3. *Mimulus guttatus*	3		OBL
4. *Epilobium ciliatum*	+		FACW
5. *Veronica anagalis-aquatica*	2		OBL
6. *Polypogon monspeliensis*	3		FACW
7. *Hordeum marinum*	2		FAC
8.			
Herb Stratum Total Cover: 100			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-76

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): +2"

Water table present? ☒ Yes ☐ No Depth (inches): 2-12"

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12"

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface Water (A1), High Water Table (A2), and Saturation (A3) hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-77**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775968 Long: -122.468066 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on uplands adjacent to seep on gentle hillslope below road. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired point with SP-76.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Bromus hordeaceous*	30	Y	FACU
2. *Centaurea solstitialis*	30	Y	UPL
3. *Hordeum marinum*	10		FAC
4. *Hordeum murinum*	10		UPL
5. *Avena barbata*	5		UPL
6. *Festuca arundinacea*	5		FACU
7. *Bromus diandrus*	5		UPL
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-77

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	7.5YR 3/3	100					Clay loam	Gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 6"

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-78**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 3-6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7489128689 Long: -122.451309902 Datum: D_WGS_1984

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in small isolated seasonal wetland. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with A-SP23.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover: N/A			
HERB STRATUM **Plot Size:** 5' r			
1. *Juncus mexicanus*	50	Yes	FACW
2. *Carex barbarae*	40	Yes	FAC
3. *Horduem marinum*	10		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 100			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: N/A			

% Bare ground in herb stratum % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-78

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2	95	7.5YR 4/4	5	C	PL, RC	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-2

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains saturation but no water table below. Sample point meets Oxidized Rhizospheres along Living Roots (C3) and FAC-Neutral Test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-79**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 1-4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7488625488 Long: -122.45134713 Datum: D_WGS_1984

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adajcent to small seasonal wetland. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit. Paired with A-SP22.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Avena barbata*	30	Yes	UPL
2. *Bromus hordeaceus*	30	Yes	FACU
3. *Festuca perennis*	30	Yes	FAC
4. *Stipa pulchra*	10		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum _____ % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-79

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-80**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7450353369 Long: -122.493271004 Datum: D_WGS_1984

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☒ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in isolated seasonal wetland near main ranch road. Sample point met wetland indicators for hydrophytic vegetation and wetland hydrology. Soils are significantly disturbed as they are old road base and assumed to be hydric due to dominance of hydrophytic vegetation and presence of hydrology indicators. Average rainfall conditions were documented during the site visit. Paired with SP-81.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover: N/A			
HERB STRATUM **Plot Size:** 5'r			
1. *Poa annua*	30	Yes	FAC
2. *Epilobium ciliatum*	10		FACW
3. *Hordeum marinum*	5		FAC
4. *Hordeum brachyantherum*	5		FACW
5. *Lythrum hyssopifolium*	5		OBL
6. *Plagiobothrys stipitatus*	2		FACW
7. *Spergularia rubra*	2		FAC
8. *Erodium botrys*	1		UPL
Herb Stratum Total Cover: 60			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: N/A			

% Bare ground in herb stratum 40 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-80

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-2	10YR 4/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 2

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soils are significantly disturbed comprised of old road base. Soils are assumed due to dominance of hydrophytic vegetaion and indicators of hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains surface soil cracks wetland hydrology indicator.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/4/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-81**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.744965 Long: -122.493383 Datum: D_WGS_1984

Soil Map Unit Name Still loam, stratified substratum NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☒ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Soils are significantly disturbed as they are of old road bed. Average rainfall conditions were documented during the site visit. Paired with SP-80.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5'r			
1. *Lepidium nitidum*	40	Yes	UPL
2. *Festuca perennis*	9		FAC
3. *Epilobium ciliatum*	5		FACW
4. *Festuca bromoides*	5		UPL
5. *Acmispon americanus*	5		UPL
6. *Calandrinia ciliata*	3		FACU
7. *Bromus hordeaceus*	2		FACU
8.			
Herb Stratum Total Cover:	69		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 31 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-81

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 3/1	60					Loam	
	2.5Y 4/2	40						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Fill material; No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-82**

Investigator(s) Tanner Harris, Rhiannon Korhummel Section,Township,Range

Landform (hillslope, terrace, etc.) Valley Local Relief (concave, convex, none) slightly concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775905 Long: -122.468045 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seepy area downslope from road which receives roadside drainage from culvert. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changes in topography and vegetation. Paired points with SP-83.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Juncus mexicanus*	40	Y	FACW
2. *Juncus xiphioides*	10		OBL
3. *Trifolium dubium*	5		UPL
4. *Geranium dissectum*	5		UPL
5. *Mimulus guttatus*	5		OBL
6. *Hordeum marinum*	5		FAC
7. *Hypochaeris glabra*	5		NL
8. *Bromus hordeaceous*	3		FACU
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: *Briza minor* (FAC)=2; Vegetation meets dominance test.

SOIL

Sampling Point SP-82

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/2	90	10YR3/6	10	C	PL, RC	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 1"

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Standing water in hoof prints. Soils saturated but no water table observed. Soils meet Surface Water (A1) and Oxidized Rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-83**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Valley Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775968 Long: -122.468066 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to seep. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired points with SP-82.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Elymus caput-medusae*	25	Y	UPL
2. *Bromus hordeaceous*	20	Y	FACU
3. *Bromus diandrus*	15		UPL
4. *Centaurea solstitialis*	15		UPL
5. *Geranium dissectum*	10		UPL
6. *Sonchus oleraceus*	3		UPL
7. *Lactuca serriola*	2		UPL
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum thatch= 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-83

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	2.5 YR 2.5/3	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-84**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Concave Slope(%) 20

Subregion(LRR) LRR C (Medit. CA) Lat: 38.745398 Long: -122.485917 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seep adjacent to ephemeral stream on hillslope. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to be hydric. Boundary determined by shift in vegetation and hydrology. Paired point with SP-85.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Toxicoscordion fontanum*	30	Y	OBL
2. *Festuca microstachys*	5		UPL
3. *Hemizonia congesta ssp. lutescens*	2		UPL
4. *Mimulus nudatus*	1		OBL
5. *Hordeum brachyantherum*	3		FACW
6.	5		
7.			
8.			
Herb Stratum Total Cover:	46		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 54 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-84

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-3	10YR 3/2	100					Loam	High pebble content

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 3

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Shovel refusal at 3 inches due to high pebble content. Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 0.5

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Primary indicators of Surface Water (A1) and Saturation (A3) were observed. Surface water was 0.5 inches deep and saturation was present at the surface. Secondary indicator FAC-Neutral Test (D5) was also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-85**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 20

Subregion(LRR) LRR C (Medit. CA) Lat: 38.745416 Long: -122.485975 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to seep associated with an ephemeral stream on hillslope. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Paired with SP-84.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Pinus sabiniana*	5	Y	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	5		
SAPLING/SHRUB STRATUM **Plot Size:** 25' radius			
1. *Eriodictyon californicum*	5	Y	UPL
2. *Quercus durata var. durata*	2	Y	UPL
3.			
4.			
Sapling/Shrub Stratum Total Cover:	7		
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca microstachys*	30	Y	UPL
2. *Bromus hordeaceous*	10	Y	FACU
3. *Acmispon wrangelianus*	3		UPL
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	43		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 45 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 5 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-85

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	10YR 3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal due to gravel. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 6/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-86**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.743623 Long: -122.439586 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in an enclosed depression. Sample meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-87. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Eleocharis macrostachya*	35	Y	OBL
2. *Hypochaeris radicata*	20	Y	FACU
3. *Hordeum marinum*	5	N	FAC
4. *Polypogon monspeliensis*	5	N	FACW
5. *Briza minor*	3	N	FAC
6. *Bromus hordeaceus*	1	N	FACU
7. *Navarretia leucocephala*	+	N	OBL
8.			
Herb Stratum Total Cover:	69		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 31 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species	35	x1	35
FACW species	5	x2	10
FAC species	8	x3	24
FACU species	21	x4	84
UPL species		x5	
Column Totals	69 (A)		153 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%
☒ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by both OBL and FACU species, but meets Prevelance Index.

SOIL

Sampling Point SP-86

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-16	7.5YR 3/3	95	7.5YR 2.5/1	5	C	M	Loam	Manganese concentrations in matrix
			5YR 4/6	+	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☒ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample meets the description of Red Parent Material (TF2) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☒ Yes ☐ No Depth (inches): 11

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: High Water Table (A2) and Saturation (A3) were observed and therefore point meets wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 6/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-87**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.743556 Long: -122.439665 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in a field above an adjacent wetland depression. Point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-86. Wetland boundaries were based on shifts in topography and vegetation. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hypochaeris radicata*	70	Y	FACU
2. *Avena barbata*	10	N	NL
3. *Vicia villosa*	5	N	NL
4. *Holocarpha virgata*	2	N	NL
5. *Bromus hordeaceus*	1	N	FACU
6.			
7.			
8.			
Herb Stratum Total Cover:	88		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 12 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-87

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 5/3	100	-	-	-	-	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: Sample does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-88**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) concave Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.739485 Long: -122.473383 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Paired point with SP-89. Sample point located within a wetland swale associated with a intermittent stream/drainage. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary determined by changing vegetation and soils.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Festuca perennis*	40	Y	FAC
2. *Rumex crispus*	15		FAC
3. *Hordeum marinum*	20	Y	FAC
4. *Ranunculus occidentalis var. occidentalis*	10		FAC
5. *Pleuropogon californicus var. californicus*	2		OBL
6. *Juncus phaeocephalus var. phaeocephalus*	+		FACW
7.			
8.			
Herb Stratum Total Cover:	87		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100% (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: 13% thatch; Vegetation meets dominance test.

SOIL

Sampling Point SP-88

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 3/1	95	7.5YR 3/4	2	C	M	clay	
			7.5YR 4/6	3	C	M		
6-13	10YR 2/1	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Three secondary indicators of Saturation Visible on Aerial Imagery (C9), Drainage Patterns (B10), and FAC-Neutral Test (D5) indicators were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-89**

Investigator(s) Scott Yarger, Sammi Hill, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) convex Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.739536 Long: -122.473296 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Paired point with SP-88. Sample point located in uplands adjacent to a wetland swale associated with a intermittent stream/drainage. Sample point does not meet criteria for hydrophytic vegetation or wetland hydrology; however soils meet Redox Dark Surface (F6) indicator.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceous*	40	Y	UPL
2. *Centaurea solstitialis*	15		UPL
3. *Hordeum marinum*	10		FAC
4. *Geranium dissectum*	10		UPL
5. *Trifolium dubium*	2		UPL
6. *Lupinus bicolor*	2		UPL
7. *thatch*			
8.			
Herb Stratum Total Cover: 79			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 21 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-89

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2	90	7.5YR 3/4	5	C	PL, M	Clay	iron redox
			N2.5/0	5	C	M	Clay	manganese concretions present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-90**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Valley Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7409218244 Long: -122.466946468 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a large wetland adjacent to a damed pond. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Average rainfall conditions were documented during the site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Eleocharis macrostachya*	80	Yes	FACW
2. *Trifolium variegatum*	5		FAC
3. *Horduem marinum*	5		FAC
4. *Mimulus guttatus*	5		OBL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-90

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	N 2.5/0	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-3

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soils saturated to 3 inches but no water table observed below. Secondary indicators of Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5) are met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/3/2018

Applicant/Owner Lotusland Investment Holdings State CA Sampling Point **SP-91**

Investigator(s) Aaron Arthur, Russell Andrews; WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7409218244 Long: -122.466946468 Datum: D_WGS_1984

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located adjacent to a large wetland adjacent to a damed pond. Sample point does not meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology. Average rainfall conditions were documented during the site visit. Paired with SP-90

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	N/A		
HERB STRATUM **Plot Size:** 5' r			
1. *Bromus hordeaceus*	60	Yes	FACU
2. *Avena barbata*	20	Yes	UPL
3. *Horduem marinum*	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	N/A		

% Bare ground in herb stratum % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-91

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	99	10YR 4/4	1	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 6/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-92**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.738002 Long: -122.458229 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located within an in-stream wetland. Sample meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-93. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Epilobium densiflorum*	25	Y	FACW
2. *Eleocharis macrostachya*	15	Y	OBL
3. *Lythrum hyssopifolia*	5	N	OBL
4. *Hordeum marinum*	2	N	FAC
5. *Festuca perennis*	+	N	FAC
6. *Polypogon monspeliensis*	+	N	FACW
7.			
8.			
Herb Stratum Total Cover:	47		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 43 % cover of biotic crust 10

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW and OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-92

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	2.5YR 3/2	90	5YR 4/6	10	C	M	C Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☒ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 5

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface Soil Cracks (B6) and Biotic Crust (B12) were observed and therefore point meets wetland criteria for hydrology. FAC-Neutral Test (D5) indicator was also observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 6/1/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-93**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) Convex Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.738019 Long: -122.458183 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in an upland area adjacent to in-stream wetland. Sample does not meet wetland criteria for hydrophytic vegetation and wetland hydrology, however soils met Redox Dark Surface (F6) indicator. Paired with wetland sample point SP-92. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	25	Y	FACU
2. *Hordeum marinum*	25	Y	FAC
3. *Avena barbata*	5	N	NL
4. *Holocarpha virgata*	5	N	NL
5. *Hypochaeris radicata*	5	N	FACU
6. *Erodium botrys*	5	N	FACU
7. *Elymus caput-medusae*	3	N	UPL
8. *Acmispon americanus*	+	N	UPL
Herb Stratum Total Cover:	73		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 22 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes. The sample has a covering of 5% thatch.

SOIL

Sampling Point SP-93

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	2.5YR 3/2	90	5YR 4/6	10	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 3

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-94**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.737083 Long: -122.454971 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample Point located in a broad floodplain. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (Red Parent Material) and assumed to by hydric. Wetland boundary based on shift in vegetation and topography. Sample Point is paired with upland sample point SP-95.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x10'			
1. *Hordeum marinum*	40	Yes	FAC
2. *Festuca perennis*	20	Yes	FAC
3. *Bromus hordeaceus*	10		FACU
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Thatch is 30%. Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-94

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	5YR 3/4	95	N 2.5/0	5	C	M	clay loam	5% Manganese concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☒ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil within sample point has 5% Manganese and meets red parent material (TF2). Red soil color is naturally problematic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): 2

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 12

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation observed but no water table below. Meets Surface Water (A1) indicator.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-95**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.73693 Long: -122.455008 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to broad wetland swale associated with an intermittent stream. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample Point is paired with Sample Point SP-94.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 30' x 30'	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus ouglasii*	60	Yes	UPL
2.			
3.			
4.			
Tree Stratum Total Cover:	60		
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Cynosurus echinatus*	20	Yes	UPL
2. *Bromus hordeaceus*	20	Yes	FACU
3. *Elymus caput-madusae*	20	Yes	UPL
4. *Briza minor*	10		FAC
5. *Avena barbata*	10		UPL
6. *Festuca myuros*	10		UPL
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species	0	x1	0
FACW species	0	x2	0
FAC species	10	x3	30
FACU species	20	x4	80
UPL species	60	x5	300
Column Totals	90 (A)		410 (B)

Prevalence Index = B/A = 410/90=4.5

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-95

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	5YR 3/4	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Gravel and clay

Depth (inches): 3

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil does not display hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were absent within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-96**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.73518 Long: -122.452301 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample Point located in a wetland swale bisected by gravel road. Sample Point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary is based on vegetation and swale topography. Paired with SP-97.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Hordeum marinum*	30	Yes	FAC
2. *Festuca perennis*	30	Yes	FAC
3. *Eleocharis macrostachya*	15		OBL
4. *Bromus hordeaceus*	10		FACU
5. *Polypogon monspeliensis*	5		FACW
6. *Juncus occidentalis*	5		FACW
7. *Phalaris paradoxa*	5		FAC
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-96

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	5YR 3/3	90	5YR 4/6	10	C	M/RC/P	Gravel and Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Gravel and Clay

Depth (inches): 4

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Redox dark surface (F6) hydric soil indicator is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized Rhizospheres along living roots (C3) were present within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-97**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 6

Subregion(LRR) LRR C (Medit. CA) Lat: 38.735092 Long: -122.452284 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample Point paired with SP-96.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Bromus hordeaceus*	20	Yes	FACU
2. *Avena barbata*	20	Yes	UPL
3. *Festuca myuros*	15		UPL
4. *Elymus caput-madusae*	5		UPL
5. *Holocarpha virgata*	5		UPL
6. *Navarretia pubescens*	5		UPL
7. *Micranthes californicus*	5		FACU
8. *Trifolium willdenowii*	5		FACW
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-97

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	2.5YR 3/2	100					Gravel and Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Gravel and Clay

Depth (inches): 4

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-98**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.732507 Long: -122.484144 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a wetland swale fed by a hillside seep. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-99. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Eleocharis macrostachya*	30	Y	OBL
2. *Stachys albens*	20	Y	OBL
3. *Juncus xiphioides*	10	N	OBL
4. *Mimulus guttatus*	10	N	OBL
5. *Polypogon monspeliensis*	8	N	FACW
6. *Hordeum brachyantherum*	2	N	FACW
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-98

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-1	5YR 2.5/1	100					Loamy clay	
1-7	5GY 4/1	95	7.5YR 4/6	5%	C	M/PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point meets the description of Depleted Matrix (F3) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-7

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface Water (A1) was observed and thereforesample point meets wetland criteria for hydrology. Two secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) indicators were also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-99**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) None Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.732441 Long: -122.483984 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-99. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	20	Y	FACU
2. *Festuca perennis*	15	N	FAC
3. *Gastridium phleoides*	15	N	FACU
4. *Stipa pulchra*	10	N	NL
5. *Hemizonia congesta ssp. lutescens*	5	N	NL
6. *Aegilops triuncialis*	5	N	NL
7. *Hordeum brachyantherum*	3	N	FACW
8. *Acmispon americanus*	3	N	UPL
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes. The sample also contains a covering of 2% *Croton setiger* (UPL) and 2% *Clarkia* sp.

SOIL

Sampling Point SP-99

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-8	7.5YR 3/2	100					Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal/cobble

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample point does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-100**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.733556 Long: -122.481942 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located on a terrace fed by drainages and is adjacent to an agricultural ditch with wetland vegetation. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Soils are naturally problematic because they meet portions of several indicators. Paired with upland sample point SP-101. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Eleocharis macrostachya*	75	Y	OBL
2. *Hordeum marinum*	5	N	FAC
3. *Lactuca saligna*	5	N	UPL
4. *Trifolium sp*	5	N	
5. *Polypogon monspeliensis*	5	N	FACW
6. *Mimulus guttatus*	3	N	OBL
7. *Cotula coronopifolia*	2	N	OBL
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-100

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	2.5Y 3/1	100					Clay	
6-14	10YR 4/2	85	5GY 4/1	15	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet portions of F2, F3, and F7. Assumed to be hydric based on meeting partial indicators and presence of hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation (A3) was observed and therefore sample point meets wetland criteria for hydrology. Soils were saturated to 12 inches below ground, but no water table was present below.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-101**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) none Slope(%)

Subregion(LRR) LRR C (Medit. CA) Lat: 38.733492 Long: -122.482062 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to wetland on a terrace. Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-100. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Stipa pulchra*	30	Y	NL
2. *Bromus hordeaceus*	20	Y	FACU
3. *Elymus caput-medusae*	10	N	UPL
4. *Erodium cicutarium*	5	N	NL
5. *Avena barbata*	5	N	NL
6. *Gastridium phleoides*	5	N	FACU
7. *Plantago erecta*	5	N	NL
8. *Holocarpha virgata*	5	N	UPL
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes. *Hemizonia* sp. and *Brodiaea elegans* are present in trace amounts.

SOIL

Sampling Point SP-101

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 3/2	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-102**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) Concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.731267 Long: -122.471009 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a seepy area at the base of a dam fence that flows into a wetland swale. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. The boundary was based on a shift in topography and vegetation. Paired with upland sample point SP-103.Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Polypogon monspeliensis*	30	Y	FACW
2. *Lotus corniculatus*	30	Y	FAC
3. *Eleocharis macrostachya*	10	N	OBL
4. *Cynodon dactylon*	10	N	FACU
5. *Festuca perennis*	10	N	FAC
6. *Lactuca salinga*	3	N	FACU
7. *Hordeum marinum*	3	N	FAC
8. *Lysimachia arvensis*	2	N	FAC
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum ____ % cover of biotic crust ____

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW and FAC species and meets wetland criteria for hydrophytic vegetation. The sample also contains a 2% covering of *Cyperus eragrostis* (FACW).

SOIL

Sampling Point SP-102

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 4/2	85	7.5YR 4/6	5	C	M	Clay loam	
	7.5YR 5/3	10					Silty loam	Inclusion

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet the description of Depleted Matrix (F3) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 0.5

Water table present? ☐ Yes ☐ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☐ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water was observed in an adjacent area to the sample point. Saturation Visible on Aerial Imagery (C9) also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/31/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-103**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) None Slope(%) 1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.73134 Long: -122.471057 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located in uplands adjacent to seep. Sample point meets wetland criteria for hydric soils (F6), but does not meet wetland criteria for hydrophytic vegetation and wetland hydrology. Paired with wetland sample point SP-102. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Elymus caput-medusae*	60	Y	UPL
2. *Acmispon americanus*	10		UPL
3. *Trifolium hirtum*	20	Y	UPL
4. *Plantago lanceolata*	5		FAC
5. *Lactuca saligna*	3		UPL
6. *Centaurea solstitialis*	2		UPL
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-103

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	7.5YR 2.5/2	98	7.5YR 4/6	2	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal

Depth (inches): 6

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-104**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) None Slope(%) 1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.726593 Long: -122.473941 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a wetland on a hillslope. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Paired with upland sample point SP-105. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Juncus phaeocephalus*	60	Y	FACW
2. *Festuca perennis*	20	Y	FAC
3. *Briza minor*	10	N	FAC
4. *Sisyrinchium bellum*	2	N	FACW
5. *Lysimachia arvensis*	1	N	FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	93		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 7 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample is dominated by FACW and FAC species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-104

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/1	100	-	-	-	-	Loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains biotic crust (B12) and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-105**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Convex Slope(%) 1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.726582 Long: -122.473881 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located along the edge of a wetland. Sample meets wetland criteria for hydric soils, but does not meet wetland criteria for hydrophytic vegetation and wetland hydrology. Paired with upland sample point SP-104. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 20' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Pinus sabiniana*	20	Y	NL
2. *Quercus wislizeni*	20	Y	NL
3.			
4.			
Tree Stratum Total Cover:	40		
SAPLING/SHRUB STRATUM **Plot Size:** 10' radius			
1. *Arctostaphylos manzanita*	10	Y	NL
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	10		
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	20	Y	FACU
2. *Acmispon americanus*	10	Y	UPL
3. *Juncus phaeocephalus*	5	N	FACW
4. *Briza minor*	2	N	FAC
5. *Avena barbata*	1	N	NL
6.			
7.			
8.			
Herb Stratum Total Cover:	38		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 62 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 5 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-105

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	7.5YR 3/2	48	2.5YR 4/1	3	C	PL	Clay loam	Rocky
	10YR 2/2	49						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample meets the description of Redox Dark Surface (F6) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☐ No Depth (inches): _____

Water table present? ☐ Yes ☐ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☐ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-106**

Investigator(s) Russell Andrews, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) convex Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.726045 Long: -122.458715 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seep complex at the toe of slope entering McCain Creek. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point is paired with SP-107.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Juncus mexicanus*	40	Yes	FACW
2. *Stachys albens*	25	Yes	OBL
3. *Zeltnera muehlenbergii*	8		FAC
4. *Polypogon monspeliensis*	5		FACW
5. *Trichostema laxum*	5		UPL
6. *Lotus corniculatus*	2		FAC
7.			
8.			
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 5 % cover of biotic crust 10

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-106

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-3	10YR 3/2	100					Sandy Clay	
3-12	5Y 4/1	75	7.5YR 3/2	25	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil within the sampled point displayed depleted matrix hydric soil indicator (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 11

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Standing water observed within the seep. Saturation present but no water table observed below (epi-saturated).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-107**

Investigator(s) Russell Andrews, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.72608 Long: -122.458665 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located above seep. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point is paired with SP-106.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Elymus caput-medusae*	20	Yes	UPL
2. *Avena barbata*	5		UPL
3. *Holocarpha virgata*	5		UPL
4. *Acmispon americanus*	4		UPL
5. *Navarretia pubescens*	4		UPL
6. *Hemizonia congesta*	3		UPL
7. *Aira caryophyllea*	2		FACU
8. *Perideridia californica*	2		UPL
Herb Stratum Total Cover:	45		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 55 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-107

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	10YR 3/2	100					Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Volcanic rock

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil within the sample point did not displayed any hydric soil indicators. Shovel refusal at 6 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators present within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-108**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.722306 Long: -122.461109 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is within a seep at the toe of a slope. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Boundary based on shift in vegetation to UPL/FACU grasses. Sample Point paired with sample point SP-109.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Eleocharis macrostachya*	30	Yes	OBL
2. *Polypogon monspeliensis*	30	Yes	FACW
3. *Hordeum brachyantherum*	15		FACW
4. *Hordeum marinum*	15		FAC
5. *Hemizonia congesta*	5		UPL
6. *Bromus hordeaceus*	3		FACU
7. *Elymus caput-madusae*	2		UPL
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-108

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 2/2	95	7.5YR 4/6	5	C	PL/M	Clay	
4-12	10YR 2/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil displays redox dark surface hydric soil indicator (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Hydrology indicator Oxidized Rhizospheres Along Living Roots (C3) was present within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-109**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.722269 Long: -122.461228 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point is paired with sample point SP-108.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca myuros*	40	Yes	UPL
2. *Bromus hordeaceus*	30	Yes	FACU
3. *Stipa pulchra*	15		UPL
4. *Holocarpha virgata*	5		UPL
5. *Acmispon americanus*	3		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	93		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 7 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-109

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-7	7.5YR 2.5/2	80					clay loam	with 20% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Gravel and clay

Depth (inches): 7

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil does not display hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were absent within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-110**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.71837 Long: -122.464965 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located on a hillslope seep wetland. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Sample point is paired with SP-111.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum*	40	Yes	FAC
2. *Festuca perennis*	30	Yes	FAC
3. *Hemizonia congesta*	10		UPL
4. *Bromus hordeaceus*	10		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-110

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/1	95	10YR 3/6	5	C	PL/RC	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil displays redox dark surface hydric soil indicator (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized rhizospheres along living roots hydrology indicator is present within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-111**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.718359 Long: -122.465066 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point is an upland point, paired with wetland Sample Point SP-110.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Elymus caput-medusae*	30	Yes	UPL
2. *Holocarpha sp.*	30	Yes	UPL
3. *Bromus hordeaceus*	15		FACU
4. *Briza minor*	10		FAC
5. *Stipa pulchra*	5		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-111

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-8	10YR 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: gravel and clay

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil does not display hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators present within this sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/17/2018

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-112**

Investigator(s) Scott Yarger, Scott Batiuk, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716635 Long: -122.464679 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is a wetland point paired with upland poihnt SP-113. Sample point is located on concave slope within a stream fringe wetland. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary delineated based on distinct change in vegetation and hydrology. Rainfall was above average for time of year.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum brachyantherum*	60	Yes	FACW
2. *Mimulus guttatus*	10	No	OBL
3. *Festuca perennis*	8	No	FAC
4. *Toxicoscordion fontanum*	2	No	OBL
5. *Triteleia peduncularis*	Tr	No	FACW
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point meets dominance test.

SOIL

Sampling Point SP-112

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-1	10YR 2/2	100					Clay loam	
1-8	2.5Y 3/1	93	7.5YR 3/4	7	C	M	Clay loam	Prominent redox concentrations.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample point meets Redox Dark Surface (F3) hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☐ Yes ☒ No Depth (inches): 0

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-8

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soil sample saturated to 8 inches in depth. Standing water observed in stream in sampled area. Sample point meets Surface Water (A1), wetland hydrology indicator.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/17/2018

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-113**

Investigator(s) Scott Yarger, Scott Batiuk, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716602 Long: -122.464712 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is an upland point paired with wetland point SP-112. Sample point is located on convex slope adjacent to and above a stream fringe wetland. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Rainfall was above average for time of year.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	30	Yes	FACU
2. *Festuca perennis*	30	Yes	FAC
3. *Castilleja rubicundula ssp. lithospermoides*	15	No	NL
4. *Sidalcea diploscypha*	5	No	NL
5. *Hordeum marinum ssp. gussoneanum*	5	No	FAC
6. *Poa secunda ssp. secunda*	5	No	FACU
7. *Hemizonia congesta ssp. clevelandii*	Tr	No	NL
8. *Lasthenia gracilis*	Tr	No	NL
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Sample point does not meet hydrophytic vegetation indicators.

SOIL

Sampling Point SP-113

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2	100	7.5YR 4/4	Tr	C		Clay loam	Trace distinct redox concentations.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Less than 1 percent redox concentrations. No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No wetland hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-114**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Toeslope Local Relief (concave, convex, none) None Slope(%) 8

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716476 Long: -122.464337 Datum:

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in seep complex at the toe of slope entering McCain Creek. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with SP-115.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Hordeum marinum*	20	Yes	FAC
2. *Mimulus nudatus*	20	Yes	OBL
3. *Navarretia jepsonii*	10	Yes	FACW
4. *Juncus xiphioides*	10	Yes	OBL
5. *Hordeum brachyantherum*	10	Yes	FACW
6. *Bromus hordeaceus*	5		FACU
7. *Hemizonia congesta*	5		UPL
8. *Festuca microstachys*	5		UPL
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 5 (A)

Total number of dominant species across all strata? 5 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-114

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-7	10YR 3/2	95	7.5YR 4/6	5	C	PL/RC	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Clay/rock

Depth (inches): 7

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soil within the sampled point displayed an hydric soil indicator of redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 6

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation observed during rare plant surveys conducted in March 2018.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/21/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-115**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) toeslope Local Relief (concave, convex, none) convex Slope(%) 8

Subregion(LRR) LRR C (Medit. CA) Lat: 38.7164 Long: -122.464408 Datum:

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located along hillside adjacent to seep wetland. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point is paired with SP-114.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Bromus hordeaceus*	15	Yes	FACU
2. *Gastridium phleoides*	15	Yes	FACU
3. *Stipa pulchra*	5		UPL
4. *Hordeum brachyantherum*	5		FACW
5. *Festuca microstachys*	5		UPL
6. *Croton setiger*	3		UPL
7. *Chlorogalum pomeridianum var. pomeridianum*	2		UPL
8. *Toxicodendron fremontii*	2		UPL
Herb Stratum Total Cover:	60		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 40 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-115

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	7.5YR 3/3	80					Loamy Clay	20% Gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Clay and gravel

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil within the sampled point did not display a hydric soil indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of wetland hydrology were present within the sampled area.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-116**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) None Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.712386 Long: -122.482092 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a small seasonal wetland at the base of a culverted ephemeral stream/drainage ditch off Butts Canyon Road. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-117. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Polypogon monspeliensis*	50	Y	FACW
2. *Hordeum brachyantherum*	20	Y	FACW
3. *Sisyrinchium bellum*	8	N	FACW
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	78		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 22 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample is dominated by FACW species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-116

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	5YR 3/3	100	-	-	-	-		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample is assumed to have hydric soils due to strong hydric vegetation indications and saturation. Redox may be masked by red soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Two secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) indicators were met. Saturation observed but no water table below.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-117**

Investigator(s) Aaron Arthur, Ra'am Akiba-Hajim Section,Township,Range

Landform (hillslope, terrace, etc.) Terrace Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.712415 Long: -122.481977 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on an upland terrace adjacent to a seasonal wetland at the base of an ephemeral stream/drainage ditch. Sample does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-116. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Aegilops triuncialis*	80	Y	NL
2. *Polypogon monspeliensis*	2	N	FACW
3. *Hesperolinon bicarpellatum*	1	N	NL
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	83		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 17 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes.

SOIL

Sampling Point SP-117

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	2.5YR 3/3	100	-	-	-	-	Sandy loam	Cobbly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: Sample does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-118**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: Long: Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a floodplain. Sample point meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-119. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Stachys albens*	60	Y	OBL
2. *Polypogon monspeliensis*	10	N	FACW
3. *Achillea millefolium*	2	N	FACU
4. *Carex serratodens*	2	N	FACW
5. *Aegilops triuncialis*	+	N	NL
6. *Mimulus guttatus*	+	N	OBL
7. *Stipa miliacea*	+	N	NL
8.			
Herb Stratum Total Cover:	74		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 26 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample is dominated by an OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-118

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	7.5YR 3/2	100	-	-	-	-	Loam	
5-14	2.5YR 3/3	85	5Y 4/1	15	D	M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☒ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample meets the description of Red Parent Material (TF2) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-6

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturated soils were observed to 6 inches below ground, but no water table was observed below. Two secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) indicators were met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-119**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) Hillslope Local Relief (concave, convex, none) Concave Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.710377 Long: -122.477809 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on an upland slope. Sample does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-118 Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1. *Adenostoma fasciculatum*	5	Y	NL
2. *Quercus durata*	2	Y	NL
3.			
4.			
Sapling/Shrub Stratum Total Cover:	7		
HERB STRATUM **Plot Size:** 5' radius			
1. *Holocarpha virgata*	8	Y	NL
2. *Hesperolinon bicarpellatum*	5	Y	NL
3. *Bromus hordeaceus*	5	Y	FACU
4. *Hordeum brachyantherum*	5	Y	FACW
5. *Hypericum concinnum*	5	Y	NL
6. *Chlorogalum pomeridianum*	2	N	NL
7. *Aegilops triuncialis*	1	N	NL
8.			
Herb Stratum Total Cover:	31		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 69 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 7 (B)

% of dominant species that are OBL, FACW, or FAC? 14 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Sample point is dominated by NL, FACU, and FACW species and does not meet wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-119

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-6	5YR 4/6	100	-	-	-	-	Loam	Compacted layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Compacted

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-120**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.721432 Long: -122.506746 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a wet meadow on a stream fringe. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. The wetland boundary was based on a shift in vegetation. Paired with upland sample point SP-121.Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Hordeum brachyantherum*	40	Y	FACW
2. *Eleocharis macrostachya*	35	Y	OBL
3. *Mimulus guttatus*	10	N	OBL
4. *Trichostema lanceolatum*	5	N	FACU
5. *Aegilops triuncialis*	5	N	NL
6. *Triteleia laxa*	3	N	NL
7. *Sisyrinchium bellum*	2	N	FACW
8. *Navarretia sp.*	1	N	-
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point is dominated by FACW and OBL species and meets wetland criteria for hydrophytic vegetation.

SOIL

Sampling Point SP-120

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	100	-	-	-	-	Clay loam	w/ cobble (alluvial)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of hydrophytic vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☐ No Depth (inches): _____

Water table present? ☒ Yes ☐ No Depth (inches): 3

Saturation Present? (includes capillary fringe) ☐ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: High Water Table (A2) and Saturation (A3) were observed and therefore B208 meets wetland criteria for hydrology. The two secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) were also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-121**

Investigator(s) Tanner Harris, Russel Andrews, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.721429 Long: -122.506676 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to a wet meadow. Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-120. Rainfall amounts were above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Aegilops triuncialis*	65	Y	NL
2. *Acmispon americanus*	3	N	UPL
3. *Trichostema lanceolatum*	1	N	FACU
4. *Chlorogalum pomeridianum*	1	N	NL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes. The sample contains a 30% covering of thatch.

SOIL

Sampling Point SP-121

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 3/2	100					Clay loam	w/ cobble

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Shovel refusal/cobble

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: B209 does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-122**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 8

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716235 Long: -122.4977 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point is located in a large wet meadow on a valley floor. Sample meets wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Paired with upland sample point SP-123. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Hordeum brachyantherum*	10	Y	FACW
2. *Juncus mexicanus*	10	Y	FACW
3. *Festuca arundinacea*	8	Y	FAC
4. *Poa secunda*	3	N	FACU
5. *Polypogon monspeliensis*	2	N	FACW
6. *Toxicoscordion fontanum*	+	N	OBL
7. *Juncus phaeocephalus*	+	N	FACW
8. *Helianthus exilis*	+	N	FACU
Herb Stratum Total Cover:	33		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 66.7 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☒ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: The sample contains a covering of 67% thatch. Festuca arundinacea growing in humocks to elevate above the saturated zone--treated as hydrophytic morphological adaptation and species considered FAC rather than FACU. Sample point is dominated by FACW and FAC species, meets dominance test.

SOIL

Sampling Point SP-122

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-16	10YR 2/1	98	7.5YR 3/3	2	C	PL, M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Sample meets the description of Redox Dark Surface (F6) and is thus considered a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-7

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soils saturated to 7 inches but no water table observed below. Three secondary indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5), and Drainage Patterns indicators were also met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 5/30/2018

Applicant/Owner Lotusland Investment Holdings Inc. State CA Sampling Point **SP-123**

Investigator(s) Scott Yarger, Nathaniel Clark, WRA Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 8

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716202 Long: -122.49765 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☐ Yes ☒ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point is located on an upland slope. Sample point does not meet wetland criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. Paired with wetland sample point SP-122. Rainfall amounts above average at time of site visit.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus hordeaceus*	30	Y	FACU
2. *Festuca microstachys*	20	Y	NL
3. *Hemizonia congesta*	7	N	NL
4. *Festuca perennis*	5	N	FAC
5. *Sidalcea diploscypha*	5	N	NL
6. *Brodiaea elegans*	+	N	FACU
7. *Calochortus vestae*	+	N	NL
8.			
Herb Stratum Total Cover:	67		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 18 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: The sample is neither dominant by nor contains a prevalence of hydrophytes. The sample contains a 15% covering of thatch.

SOIL

Sampling Point SP-123

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	7.5 YR 3/3	100	-	-	-	-	Loam	Cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: cobbles

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Sample point does not meet wetland soils criteria for hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point does not meet wetland criteria for hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-124**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.72339 Long: -122.514593 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a depressional wetland at base of old golf course green. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Sample point paired with SP-125.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Polypogon monspeliensis*	20	Yes	FACW
2. *Carex c.f. barbarea*	20	Yes	FAC
3. *Typha latifolia*	10		OBL
4. *Festuca arundinacea*	5		FACU
5. *Eleocharis macrostachya*	5		OBL
6.			
7.			
8.			
Herb Stratum Total Cover:	60		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 40 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-124

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-8	2.5Y3/1	100					Clay	With alluvial gravels

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Heavy Clay

Depth (inches): 8

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial obligate vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5)

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-125**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.723412 Long: -122.514491 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on berm adjacent to basin. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-124.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Bromus hordeaceus*	50	Yes	FACU
2. *Centaurea solstitialis*	40	Yes	UPL
3. *Festuca arundinacea*	5		FACU
4. *Lactuca saligna*	4		UPL
5. *Cirsium undulatum??*	1		FACU
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test

SOIL

Sampling Point SP-125

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR2/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Heavy Clay

Depth (inches): 10

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-126**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.720782 Long: -122.514118 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point within pond in depressional area. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Sample point paired with SP-127.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Eleocharis macrostachya*	40	Yes	OBL
2. *Typha latifolia*	10		OBL
3. *Polypogon monspeliensis*	8		FACW
4. *Rumex crispus*	2		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	60		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 40 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-126

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR2/1	100					Clay	serpentine soils

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial obligate vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-127**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.720777 Long: -122.513986 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on berm adjacent to pond and swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-126.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Phalaris aquatica*	60	Yes	FACU
2. *Elymus caput-medusae*	20	Yes	NL
3. *Centaurea solstitialis*	10		UPL
4. *Bromus hordeaceus*	10		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-127

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators of hydric soils were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-128**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: -122.516799 Long: 38.7175 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in an old golf course pond with drain, which is now a seasonal wetland. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for vegetation and hydrology. Soils are problematic (serpentine) and assumed to be hydric. Sample point paired with SP-130.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Polypogon monspeliensis*	35	Yes	FACW
2. *Eleocharis macrostachya*	35	Yes	OBL
3. *Festuca perennis*	15		FAC
4. *Lactuca saligna*	5		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Sample point meets dominance test.

SOIL

Sampling Point SP-128

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-10	2.5YR2.5/1	100					Clay	serpentine soils

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Clay Shovel Refusal

Depth (inches): 10

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial obligate vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains biotic crust (B12) and meets FAC-neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-129**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.71726 Long: -122.516582 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a wetland swale. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography. Sample point paired with SP-130.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Juncus mexicanus*	35	Yes	FACW
2. *Juncus xiphioides*	20	Yes	OBL
3. *Festuca arundinacea*	20	Yes	FAC
4. *Rumex crispus*	3		FAC
5. *Persicaria punctata*	2		OBL
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☒ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Festuca arundinacea growing in humocks to elevate above the saturated zone--treated as hydrophytic morphological adaptation and species considered FAC rather than FACU. Vegetation meets dominance test.

SOIL

Sampling Point SP-129

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	2.5Y3/1	98	7.5YR 4/6	2	C	M/PL	Clay	Depletions along pore linings

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet redox dark surface (F6). Deep hoof punch relative to adjacent upland areas suggest long-term saturation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☐ No Depth (inches): _____

Water table present? ☐ Yes ☐ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☐ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-130**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.717365 Long: -122.516696 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on a berm between golf course pond and stream/wetland swale. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology. Sample point paired with SP-128 and SP-129.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Centaurea solstitialis*	40	Yes	UPL
2. *Elymus caput-medusae*	40	Yes	NL
3. *Phalaris aquatica*	10		FACU
4. *Convolvulus arvensis*	2		NL
5. *Lactuca saligna*	3		UPL
6. *Helminthotheca echiodies*	5		FAC
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-130

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-10	2.5Y2.5/1	50					Clay	
	2.5Y3/2	50					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/6/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-131**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.717233 Long: -122.513955 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a depression within dried pond. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-132.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Typha latifolia*	30	Yes	OBL
2. *Polypogon monspeliensis*	30	Yes	FACW
3. *Eleocharis macrostachya*	20	Yes	OBL
4. *Juncus xiphioides*	10		OBL
5. *Zeltnera tricantha*	5		FAC
6. *Centaurea solstitialis*	3		UPL
7. *Lactuca saligna*	2		UPL
8.			
Herb Stratum Total Cover:			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-131

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	5Y4/2	98	5Y5/6	2	C	PL	Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet depleted matrix (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-132**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.717236 Long: -122.513832 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on upland ridge between pond and swale; higher in topograhy than adjacent features. Sample point does not meet criteria for hydric soils or wetland hydrology. Sample point paired with SP-131.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum ssp. gussoneanum*	47	Yes	FAC
2. *Festuca perennis*	30	Yes	FAC
3. *Lactuca saligna*	5		UPL
4. *Bromus hordeaceus*	5		FACU
5. *Elymus caput-medusae*	5		NL
6. *Centaurea solstitialis*	3		UPL
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: 5% thatch. Vegetation meets dominance test.

SOIL

Sampling Point SP-132

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR3/2	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology were observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-133**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.719096 Long: -122.511443 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point taken in broad wetland swale adjacent to intermittent stream. Wetland boundary delineated based on topography and vegetation. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-134.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Juncus mexicanus*	30	Yes	FACW
2. *Juncus xiphiodes*	25	Yes	OBL
3. *Polypogon monspeliensis*	20	Yes	FACW
4. *Euthamia occidentalis*	15		FACW
5. *Epilobium densiflorum*	5		FACW
6. *Melilotus alba*	1		NL
7. *Rumex crispus*	1		FAC
8.			
Herb Stratum Total Cover:	97		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 3

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation was observed within the sampled area.

SOIL

Sampling Point SP-133

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-3	10YR3/2	100					Sand	
3-6	10YR2/1	100					Clay Loam	
6-12	5Y4/1	98	2.5YR3/3	2	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Depleted Matrix (F3).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-134**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.718977 Long: -122.511521 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point taken on berm adjacent to broad wetland swale.Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-133.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus diandrus*	60	Yes	NL
2. *Avena barbata*	30	Yes	NL
3. *Lactuca serriola*	2		FACU
4. *Festuca arundinacea*	t		FACU
5. *Cynodon dactylon*	t		FACU
6. *Aegilops triuncialis*	t		NL
7. *Bromus hordeaceus*	t		FACU
8.			
Herb Stratum Total Cover: 92			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: 8% thatch. Vegetation does not meet dominance test.

SOIL

Sampling Point SP-134

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR3/2	90					Sandy Clay	High pebble content
	5Y4/1	10						Non-redoximorphic mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No hydric soil indicators were observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No hydrology indicators observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-135**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.716016 Long: -122.515173 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located within a depressional feature. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-136.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Hordeum marinum ssp. gussoneanum*	50	Yes	FAC
2. *Lotus corniculatus*	40	Yes	FAC
3. *Rumex crispus*	10		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Vegetation meets dominance test.

SOIL

Sampling Point SP-135

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-1	5Y3/2	100					Loamy Clay	serpentine soils
1-4	5Y2.5/1	100					Clay	serpentine soils
4-8	2.5Y4/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial obligate vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-136**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.715954 Long: -122.515288 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located on a slope between an abandonded golf cart path and a small wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-135.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Elymus caput-medusae*	80	Yes	NL
2. *Centaurea solstitialis*	10		UPL
3. *Festuca arundinacea*	8		FACU
4. *Convolvulus arvensis*	2		NL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-136

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-8	5Y2.5/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-137**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.71548 Long: -122.513649 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a marginal wetland swale feature with patchy upland/wetland vegetation. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-138.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Hordeum marinum ssp. gussoneanum*	40	Yes	FAC
2. *Festuca perennis*	15		FAC
3. *Bromus hordeaceus*	15		FACU
4. *Centaurea solstitialis*	5		UPL
5. *Rumex crispus*	3		FAC
6. *Lactuca saligna*	2		UPL
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-137

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR 3/2	75	7.5YR3/4	25	C	PL/RC	Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet redox dark surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Oxidized rhizospheres along Living Roots (C3).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-138**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) None Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.715477 Long: -122.513714 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located adjacent to a broad wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-137.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Centaurea solstitialis*	40	Yes	UPL
2. *Bromus hordeaceus*	40	Yes	FACU
3. *Hordeum marinum ssp. gussoneanum*	18		FAC
4. *Chichorium intybus*	2		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-138

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR3/2	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-139**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.714049 Long: -122.515089 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in wetland swale/stream. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-140.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Festuca arundinacea*	45	Yes	FAC
2. *Juncus patens*	30	Yes	FACW
3. *Euthamia occidentalis*	20	Yes	FACW
4. *Polypogon monspeliensis*	3		FACW
5. *Cyperus eragrostis*	2		FACW
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☒ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Festuca arundinacea growing in humocks to elevate above the saturated zone--treated as hydrophytic morphological adaptation and species considered FAC rather than FACU. Vegetation meets dominance test.

SOIL

Sampling Point SP-139

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	5Y2.5/1	100						with alluvial gravel
4-9	5Y2.5/1	98	7.5YR4/6	2	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Clay shovel refusal

Depth (inches): 9

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet redox dark surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-140**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.714074 Long: -122.515148 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-139.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Elymus caput-medusae*	70	Yes	NL
2. *Festuca arundinacea*	15		FACU
3. *Avena sp.*	5		NL
4. *Lactuca saligna*	5		UPL
5. *Centaurea solstitialis*	5		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-140

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-8	5Y2.5/1	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-141**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713852 Long: -122.514579 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in golf course pond with drain. Wetland boundary based on shift in vegetation and topography. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-142.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Eleocharis macrostachya*	98	Yes	OBL
2. *Polypogon monspeliensis*	2		FACW
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks:

SOIL

Sampling Point SP-141

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10Y3/1	98	5Y4/4	2	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet redox dark surface (F6).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets biotic crust (B12), Saturation Visible on Aerial Imagery (C9), and the FAC-Neutral test (D5).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-142**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713833 Long: -122.514678 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point located on a berm between a broad wetland swale associated with a stream and an abandonded golf course pond. Sample point paired with SP-141.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Elymus caput-medusae*	65	Yes	NL
2. *Elymus triticoides*	15		FAC
3. *Centaurea solstitialis*	15		UPL
4. *Festuca arundinacea*	5		FACU
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-142

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-18	5Y2.5/1	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-143**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.715877 Long: -122.511441 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in man made swale associated with golf course. Wetland boundary delineated based on topography and vegetation. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Sample point paired with SP-144.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum ssp. gussoneanum*	30	Yes	FAC
2. *Eleocharis macrostachya*	30	Yes	OBL
3. *Festuca perennis*	15		FAC
4. *Bromus hordeaceus*	10		FACU
5. *Rumex crispus*	5		FAC
6. *Polypogon monspeliensis*	5		FACW
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation was observed within the sampled area.

SOIL

Sampling Point SP-143

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR3/2	95	5YR3/3	5	C	M/PL	Sandy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Biotic Crust (B12) and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-144**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.715734 Long: -122.511169 Datum: WGS 84

Soil Map Unit Name Yorkville variant clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point taken adjacent to swale associated with golf course. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-143.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Elymus caput-medusae*	70	Yes	NL
2. *Centaurea solstitialis*	15		NL
3. *Festuca arundinacea*	3		FACU
4. *Bromus diandrus*	2		NL
5. *Bromus hordeaceus*	2		FACU
6.			
7.			
8.			
Herb Stratum Total Cover:	92		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 3 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: 5% Thatch. Vegetation does not meet dominance test.

SOIL

Sampling Point SP-144

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR3/3	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soils observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-145**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713365 Long: -122.509533 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point taken in broad wetland swale. Wetland boundary delineated based on topography and vegetation. Sample point meets criteria for hydrophytic vegetation and wetland hydrology. Soils are problematic (serpentine) and assumed to by hydric. Sample point paired with SP-146.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Juncus xiphiodes*	65	Yes	OBL
2. *Festuca perennis*	30	Yes	FAC
3. *Rumex crispus*	1		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 96			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 4 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation was observed within the sampled area.

SOIL

Sampling Point SP-145

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y3/2	49	7.5YR2/3	1	C	M	Clay	serpentine soils
	2.5Y3/1	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Dark serpentine parent material may be masking redox. Soils assumed hydric based on dominance of perennial obligate vegetation and presence of primary indicators of wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point meets Biotic Crust (B12) and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-146**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Convex Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713351 Long: -122.509705 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point taken in uplands on edge of large wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-145.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	80	Yes	FACU
2. *Hemizonia congesta subsp. calyculata*	5		NL
3. *Festuca perennis*	3		FAC
4. *Elymus caput-medusae*	t		NL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	88		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 8 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: 4% thatch. Vegetation does not meet dominance test.

SOIL

Sampling Point SP-146

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	2.5Y3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators of hydric soil observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-147**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713919 Long: -122.507858 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located within large wetland swale associated with stream. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary delineated based on topography and vegetation.Sample point paired with SP-148.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca perennis*	60	Yes	FAC
2. *Polypogon monspeliensis*	20	Yes	FACW
3. *Juncus xiphiodes*	20	Yes	OBL
4. *Zeltnera muehlenbergii*	t		FAC
5. *Lactuca serriola*	t		FACU
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation was observed within the sampled area.

SOIL

Sampling Point SP-147

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	N 3/1	80	7.5YR 4/6	20	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet Redox Dark Surface (F6) indicator.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 4

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Saturation observed but no water table associated with it. Two secondary hydrology indicators of Saturation Visible on Aerial Imagery (C9) and FAC-Neutral Test (D5) were met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 9/7/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-148**

Investigator(s) Gavin Albertoli, Scott Yarger, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) valley floor Local Relief (concave, convex, none) Concave Slope(%) 0-2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.713985 Long: -122.507581 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 2 to 8 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in uplands adjacent to a broad wetland swale. Sample point does not meet criteria for hydrophytic vegetation, hydric soils or wetland hydrology. Sample point paired with SP-147.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca myuros*	35	Y	FACU
2. *Elymus caput-medusae*	20	Y	NL
3. *Hemizonia congesta subsp. calyculata*	5		NL
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 60			
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover: 0			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Vegetation does not meet dominance test.

SOIL

Sampling Point SP-148

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-6	10YR3/3	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: clay shovel refusal

Depth (inches): 6

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 6 inches. No indicators of hydric soil observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of hydrology observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-149**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Swale Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.732011 Long: -122.540729 Datum: WGS 84

Soil Map Unit Name Jafa loam, 2 to 5 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a marginal swale, paired with SP-150. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Agrostis avenaceae*	40	Yes	FACW
2. *Festuca perennis*	35	Yes	FAC
3. *Holocarpha virgata*	15		NL
4. *Eryngium aristulatum*	5		OBL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-149

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	10YR 5/2	75	7.5YR 4/6	25	C	PL/RC/M	Clay	
5-10	10YR 4/2	50	10YR 3/4	50	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Redox dark surface hydric soil indicator was observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water incidentally observed March through May 2018.Sample point meets Oxidized Rhizosphere along Living Roots (C3) and Saturation Visible on Aerial Imagery (C9).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-150**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Field Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.732144 Long: -122.540777 Datum: WGS 84

Soil Map Unit Name Jafa loam, 2 to 5 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point located in an upland field. Paired with SP-149. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Avena barbata*	30	Yes	UPL
2. *Bromus hordeaceus*	20	Yes	FACU
3. *Elymus caput-medusae*	20	Yes	UPL
4. *Holocarpha virgata*	8		UPL
5. *Trifolium hirtum*	2		UPL
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-150

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 4/4	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-151**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Swale Local Relief (concave, convex, none) Concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.730141 Long: -122.541315 Datum: WGS 84

Soil Map Unit Name Jafa loam, 2 to 5 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point located in a swale adjacent to wet field. Paired with SP-152. Sample point met wetland indicators for hydric soils, wetland hydrology, and hydrophytic vegetation.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Juncus balticus*	40	Yes	FACW
2. *Hemizonia congesta ssp. luzulifolia*	20	Yes	UPL
3. *Leontodon saxatilis*	10		FACU
4. *Juncus occidentalis*	5		FACW
5. *Eryngium aristulatum*	5		OBL
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species	5	x1	5
FACW species	45	x2	90
FAC species	0	x3	0
FACU species	10	x4	40
UPL species	20	x5	100
Column Totals	80 (A)		235 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%
☒ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-151

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-7	10YR3/1	90	7.5YR 3/4	10	C	PL/RC	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Redox dark surface (F6) hydric soil indicator was observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water incidentally observed March through May 2018. Deep hoof prints observed.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-152**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Toe slope Local Relief (concave, convex, none) None Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.730205 Long: -122.54139 Datum: WGS 84

Soil Map Unit Name Jafa loam, 2 to 5 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point paired with SP-151. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Elymus caput-medusae*	50	Yes	UPL
2. *Bromus hordeaceus*	30	Yes	FACU
3. *Avena barbata*	20	Yes	UPL
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-152

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR4/3	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-153**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Swale Local Relief (concave, convex, none) Concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.727979 Long: -122.542389 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample Point paired with SP-154. Sample point did meet wetland indicators for hydrophytic vegetation, hydric soils, and wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Juncus balticus*	55	Yes	FACW
2. *Juncus xiphioides*	5		OBL
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	60		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 40 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation is present within the sampled area.

SOIL

Sampling Point SP-153

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	10YR 5/2	95	10YR3/6	5	C	PL/RC	Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Clay

Depth (inches): 5

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Depleted matrix (F3) hydric soil indicator was observed within the sample point. Deep hoof prints were also observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☒ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Surface water observed indidentally March through May 2018.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-154**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Local Relief (concave, convex, none) Convex Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.727894 Long: -122.542433 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-153. Upland sample point with *Quercus lobata*. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 30'	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	60	Yes	FACU
2.			
3.			
4.			
Tree Stratum Total Cover:	60		
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Avena barbata*	30	Yes	UPL
2. *Festuca perennis*	30	Yes	UPL
3. *Bromus hordeaceus*	15		FACU
4. *Carduus pycnocephalus*	5		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-154

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 4/3	100					Loamy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-155**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Local Relief (concave, convex, none) Concave Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.726374 Long: -122.543079 Datum:

Soil Map Unit Name Bressa-Millsholm loams, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample Point located in a swale starting off property. Sample point meets criteria for hydrophytic vegetation, hydric soils and wetland hydrology. Wetland boundary based on shift in aerial signature, vegetation and topography. Sample point paired with SP-156

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Juncus balticus*	85	Yes	FACW
2. *Hordeum marinum*	8		FAC
3. *Rumex crispus*	2		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation was observed within the sampled area.

SOIL

Sampling Point SP-155

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	10YR 3/2	80	7.5YR 3/4	20	C	RC/PL/M	Loamy Clay	
5-12	10YR 3/1	50	7.5YR 3/4	10	C	RC/PL/M	Loamy Clay	40% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soil within the sampled point displayed an hydric soil indicator of redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Oxidized rhizospheres along living roots (C3) were observed within the sampled area. Surface water incidentally observed from March through May 2018.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City Unincorporated County Lake Sampling Date 8/28/2018

Applicant/Owner Lotus Land Investment Holdings, Inc. State CA Sampling Point **SP-156**

Investigator(s) Tanner Harris, Rhiannon Korhummel, WRA, Inc. Section,Township,Range

Landform (hillslope, terrace, etc.) Local Relief (concave, convex, none) None Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.726445 Long: -122.543088 Datum: WGS 84

Soil Map Unit Name Bressa-Millsholm loams, 15 to 30 percent slopes NWI classification None

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point paired with SP-155. Sample point did not meet wetland indicators for hydrophytic vegetation, hydric soils, or wetland hydrology.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: N/A	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: N/A			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 10' x 10'			
1. *Avena barbata*	30	Yes	UPL
2. *Bromus hordeaceus*	20	Yes	FACU
3. *Briza maxima*	10		UPL
4. *Croton setiger*	10		UPL
5. *Centaurea solstitialis*	5		UPL
6. *Holocarpha virgata*	3		UPL
7. *Acmispon americanus*	2		UPL
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: N/A			
1.			
2.			
Woody Vines Total Cover:	0		

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation is not present within the sampled area.

SOIL

Sampling Point SP-156

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 4/4	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: Hydric soil indicators were not observed within the sample point.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology indicators were not observed within the sample point.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-157**

Investigator(s) Scott Yarger, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) plain Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.778918 Long: -122.470474 Datum: WGS 84

Soil Map Unit Name Water NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☐ Yes ☒ No
Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Sample point taken in FAC/FACW-dominated vernally mesic valley grassland. Sample point meets vegetation criteria but does not have hydric soils or wetland hydrology. Determined to be upland. No paired point.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca perennis*	45	X	FAC
2. *Trifolium wildenovii*	10		FACW
3. *Elymus caput-medusae*	10		UPL
4. *Hemizonia congesta*	5		UPL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 30 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-157

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 3/2	100					Clay	hoof punch

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Extensive hoof punch, but no persistent indicators.

No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-158**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.777389 Long: -122.47765 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Hillslope seep that flows down road. Boundary based on shift in vegetation and extent of wetland hydrology indicators. Sample point paired with SP-159.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Eleocharis macrostachya*	40	X	OBL
2. *Festuca perennis*	20	X	FAC
3. *Medicago polymorpha*	8		FACU
4. *Lysimachia arvensis*	5		NL
5. *Carduus pycnocephalus*	5		NL
6. *Lythrum hyssopifolium*	2		OBL
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-158

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	5Y 2.5/1	93	7.5YR 3/4	7	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils meet F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2-4

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-8

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicator A1; meets secondy hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-159**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.777353 Long: 38.777353 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point paired with SP-158. Hillslope adjacent to seep.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Avena barbata*	15	X	NL
2. *Festuca perennis*	15	X	FAC
3. *Bromus hordeaceus*	15	X	FACU
4. *Medicago polymorpha*	10		FACU
5. *Trifolium hirtum*	10		NL
6. *Centaurea melitensis*	5		NL
7. *Carduus pycnocephalus*	3		NL
8. *Amsinckia sp.*	2		NL
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: thatch ~ 10%

No indicators met.

SOIL

Sampling Point SP-159

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Soil cracking present, but deep. Shrink-swell clays.

No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-160**

Investigator(s) Scott Yarger, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) convex Slope(%) 5-30

Subregion(LRR) LRR C (Medit. CA) Lat: 38.777068 Long: -122.477086 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland sample point in seep at toe of slope at the edge of a road. Seep extends up hill on slope. Boundary based on shift in vegetation. Paired with SP-161.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum ssp. gussoneanum*	45	X	FACW
2. *Festuca perennis*	30	X	FAC
3. *Juncus bufonius*	8		FACW
4. *Bromus hordeaceus*	3		FACU
5. *Trifolium glomeratum*	1		NL
6. *Erodium brachycarpum*	1		NL
7.			
8.			
Herb Stratum Total Cover:	88		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 12

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-160

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	10YR 3/1	80	10YR 3/3	20	C	M/PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicator B12 (Biotic Crust).

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-161**

Investigator(s) Scott Yarger, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 20

Subregion(LRR) LRR C (Medit. CA) Lat: 38.777102 Long: -122.477172 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point paired with SP-160 on hillslope adjacent to seep above road.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca perennis*	20	X	FAC
2. *Bromus hordeaceus*	15	X	FACU
3. *Avena barbata*	10		NL
4. *Medicago polymorpha*	5		FACU
5. *Agoseris sp.*	3		?
6.			
7.			
8.			
Herb Stratum Total Cover:	53		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 47 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-161

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-162**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775327 Long: -122.476112 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Seepy area at toe of slope adjacent to floodplain. Sample point paired with SP-163. Boundary based on shift in vegetation and extent of saturated soils.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Eleocharis macrostachya*	40	X	OBL
2. *Ranunculus muricatus*	20	X	FACW
3. *Medicago polymorpha*	10		FACU
4. *Trifolium dubium*	10		UPL
5. *Lysimachia arvensis*	5		NL
6. *Festuca perennis*	5		FAC
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-162

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	2.5Y 3/1	93	7.5YR 3/4	7	C	PL/M	Clay	
8-10	2.5Y 3/2	90	7.5YR 3/4	10	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: F6 - thickness requirement 4". Requires matrix value 3 or less and chroma 1 or less w/ 2% distinct or prominent redox. Have 7% in layer 1 with prominent redox. Meets indicator F6.

Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2-4 in hoof punch

Water table present? ☒ Yes ☐ No Depth (inches): 10+

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-10

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators A1, A2, and A3 and secondary indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-163**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.775379 Long: -122.476104 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point paired with SP-162.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Medicago polymorpha*	60	X	FACU
2. *Trifolium dubium*	15		UPL
3. *Festuca perennis*	10		FAC
4. *Bromus hordeaceus*	5		FACU
5. *Trifolium hirtum*	5		NL
6. *Hypochaeris glabra*	3		NL
7. *Avena barbata*	2		NL
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met

SOIL

Sampling Point SP-163

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	10YR 3/2	100					Clay loam	
10-12	10YR 3/2	100	7.5YR 3/4	trace	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-164**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.773577 Long: -122.47728 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Unpaired sample point in potential wetland signature. FAC-dominated vegetation, but soils and hydrology criteria not met; determined to be upland.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Trifolium variegatum*	20	X	FAC
2. *Bromus hordeaceus*	15	X	FACU
3. *Briza minor*	10	X	FAC
4. *Festuca perennis*	10	X	FAC
5. *Hordeum marinum ssp. gussoneanum*	10	X	FAC
6. *Hypochaeris glabra*	10	X	NL
7. *Ranunculus muricatus*	10	X	FACW
8. *Erodium cicutarium*	5		NL
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 5 (A)

Total number of dominant species across all strata? 7 (B)

% of dominant species that are OBL, FACW, or FAC? 71 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Herb stratum cont. Juncus bufonius 5% FACW, Trifolium fucatum 5% FACU

SOIL

Sampling Point SP-164

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-2	7.5YR 2.5/1	90	7.5YR 3/4	2	C	PL	Loam	
2-10	7.5YR 3/4	90	2.5YR 4/2	10	D	PL	Loam	Matrix = redox
10-12	7.5YR 4/4	90	2.5YR 4/3	10	D	PL	Clay loam	Matrix = redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-165**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.)_____ Local Relief (concave, convex, none) concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.773764 Long: -122.474893 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland swale in paleo channel. Boundary based on shift in vegetation and channel topography. Paired with SP-166.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Ranunculus muricatus*	35	X	FACW
2. *Erythranthe guttata*	20	X	OBL
3. *Festuca perennis*	15		FAC
4. *Hordeum marinum ssp. gussoneanum*	5		FAC
5. *Plagiobothrys sp.*	5		?
6. *Montia sp.*	3		?
7. *Poa annua*	2		FAC
8.			
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 15 % cover of biotic crust Trace

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-165

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 2/1	100					Loam	
6-10	10YR 3/2	95	7.5YR 3/4	5	C	M/PL	Sandy loam	with rocks and boulders

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: Cobble / rocks

Depth (inches): 10"

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils very dark. Distinct redox concentrations.

Meets hydric soil indicator F6

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☒ Yes ☐ No Depth (inches): 9-10

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-9

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Deeper hoof prints relative to adjacent upland areas.

Meets primary hydrology indicators A2, A3, B13 and secondary hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-166**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) none Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.773819 Long: -122.474924 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point on swale edge. Paired with SP-165.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	20	X	FACU
2. *Hordeum murinum*	20	X	FACU
3. *Erodium cicutarium*	10		NL
4. *Medicago polymorpha*	10		FACU
5. *Sisymbrium officinale*	5		NL
6. *Festuca bromoides*	5		FACU
7. *Amsinckia cf. intermedia*	3		NL
8. *Hypochaeris glabra*	1		NL
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Herb stratum cont.: Carduus pycnocephalus 1% NL

No indicators met.

SOIL

Sampling Point SP-166

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	7.5YR 3/2	100					Sandy clay loam	
4-11	7.5YR 3/3	100					Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: cobble / rock

Depth (inches): 11

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-167**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.774844 Long: -122.473548 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland swale. Boundary based on shift in vegetation and topography. Sample point paired with SP-168.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 2' x 5'			
1. *Ranunculus muricatus*	60	X	FACW
2. *Plagiobothrys sp.*	10		?
3. *Festuca perennis*	7		FAC
4. *Poa annua*	3		FAC
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-167

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-3	2.5YR 3/2	85	7.5YR 3/4	15	C	M/PL	Clay loam	
3-8	7.5YR 4/2	95	7.5YR 4/6	5	C	M/PL	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: rock / gravel

Depth (inches): 8

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Meets F3.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators B6 and B9 and secondary indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 4/24/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-168**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S25 T11N R06W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) none Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.774792 Long: -122.473583 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point paired with SP-167.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	20	X	FACU
2. *Festuca bromoides*	20	X	FACU
3. *Hordeum murinum*	15		FACU
4. *Trifolium hirtum*	15		NL
5. *Medicago polymorpha*	10		FACU
6. *Capsella bursa-pastoris*	10		NL
7. *Festuca perennis*	5		FAC
8.			
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-168

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-2	10YR 3/3100	100					Loam	
2-8	7.5YR 4/4	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: gravel / rock

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Shovel refusal at 8 inches.

No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-169**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S31 T11N R05W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) slight concave Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.761985 Long: -122.46082 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland swale. Paired with SP-170. Boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum ssp. gussoneanum*	25	X	FACW
2. *Trifolium variegatum*	25	X	FAC
3. *Eleocharis macrostachya*	25	X	OBL
4. *Leontodon saxatilis*	10		FACU
5. *Eryngium aristulatum*	3		OBL
6. *Erythranthe guttata*	2		OBL
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-169

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-10	7.5YR 3/2	83	10YR2/1	10	C	M		[ma]
			5YR 3/4	7	C	PL/M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: cobble

Depth (inches): 10"

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Meets F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☒ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☒ Yes ☐ No Depth (inches): 9-10

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-9

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary wetland hydrology indicators A1, A2, A3, A4 and secondary hydrology indicator D5. Standing water in microdepressions.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-170**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S31 T11N R05W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) slight convex Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.76202 Long: -122.460795 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 2 to 15 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point. Paired with SP-169.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	30	X	FACU
2. *Acmispon americanus*	20	X	UPL
3. *Avena barbata*	15		NL
4. *Trifolium dubium*	10		UPL
5. *Erodium cicutarium*	10		NL
6. *Trifolium hirtum*	5		NL
7. *Hordeum marinum ssp. gussoneanum*	5		FACW
8.	t		
Herb Stratum Total Cover:	95		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Thatch - 5%

No indicators met.

SOIL

Sampling Point SP-170

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 5/3	95	10YR 2/1	5	C	M	Clay loam	Mn concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-171**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753874 Long: -122.496726 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point in depression in wet meadow. Boundary based on shift in vegetation and topography. Paired with SP-172.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Hordeum marinum*	60	X	FAC
2. *Lasthenia glabrata*	5		FACW
3. *Pleuropogon californicus*	3		OBL
4. *Rumex crispus*	2		FAC
5. *Veronica peregrina*	t		FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 20

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-171

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 2.5/1	75	2.5Y 4/3	15	D	M	Clay	
			7/5YR 3/4	7	C	PL/M	Clay	
			7/5YR 4/6	3	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators B9 and B12.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-172**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) none Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753952 Long: -122.49671 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Margin of field, adjacent to stream. Separated from adjacent wetland by low berm at fenceline. Paired with SP-171. Boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	30	X	FACU
2. *Festuca arundinacea*	15	X	FACU
3. *Festuca perennis*	15	X	FAC
4. *Lactuca serriola*	10		FACU
5. *Taraxacum officinale*	3		FACU
6. *Convolvulus arvensis*	1		NL
7. *Vicia sativa*	1		FACU
8. *Hemizonia congesta*	t		UPL
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-172

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 2.5/1	98	7.5YR 3/4	2	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: Soil with vertic cracking.

No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-173**

Investigator(s) Tanner Harris (WRA, Inc.) Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) depression Local Relief (concave, convex, none) concave Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753096 Long: -122.49739 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland in former agricultural field. Edge of broad shallow depression where Carex praegracilis (clustered field sedge) is dominant. Paired with SP-174.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Carex praegracilis*	70	X	FACW
2. *Lactuca saligna*	10		UPL
3. *Festuca arundinacea*	10		FACU
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 10

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-173

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-16	N 2.5/-	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils assumed hydric based on dominance of obligate wetland vegetation and primary hydrology indicators.

3-inch layer of organic matter on surface, suggestive of long-term inundation. Dark soils may be masking redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary wetland hydrology indicator B12 and secondary indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-174**

Investigator(s) Tanner Harris (WRA, Inc.) Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) field Local Relief (concave, convex, none) none Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.753197 Long: -122.497187 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point adjacent to wetland feature. SP taken where hydrology indicators not observed and vegetation is not hydrophytic. Paired with SP-173.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca arundinacea*	35	X	FACU
2. *Lactuca salgina*	25	X	UPL
3. *Lotus tenuis*	20		FACU
4. *Trifolium fragiferum*	15		FAC
5. *Hordeum marinum*	3		FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	98		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 2 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-174

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	N 2.5/-	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/17/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-175**

Investigator(s) Tanner Harris, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) concave Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.75084 Long: -122.497225 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point taken in swale adjacent to raised berm. Paired with SP-176. Boundary based on shift in vegetation and topography.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Eleocharis macrostachya*	50	X	OBL
2. *Polypogon monspeliensis*	10		FACW
3. *Festuca arundinacea*	10		FACU
4. *Juncus xiphioides*	5		OBL
5. *Trifolium fragiferum*	5		FAC
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 10

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-175

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-11	N 2.5/-	100					Clay	
11-12	N 2.5/-	99	5YR 3/4	1	C	M	Clay	slightly more moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils assumed hydric based on dominance of obligate wetland vegetation and strong primary hydrology indicators. Dark soils may be masking redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary wetland hydrology indicator B12 and secondary hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/17/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-176**

Investigator(s) Tanner Harris (WRA, Inc.) Rhiannon Korhummel (WRA, Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) terrace Local Relief (concave, convex, none) convex Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.750711 Long: -122.497231 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point paired with SP-175.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca arundinacea*	70	x	FACU
2. *Lotus corniculatus*	25	X	FAC
3. *Trifolium fragiferum*	5		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 100			
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-176

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 2/2	100					Clay	root zone
4-12	2.5Y 2.5/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-177**

Investigator(s) Tanner Harris (WRA, Inc.) Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) field Local Relief (concave, convex, none) none Slope(%) 0-1

Subregion(LRR) LRR C (Medit. CA) Lat: 38.749616 Long: -122.494129 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point on gentle slope near vineyards in former agricultural field. Sample point representative of upland conditions in area.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Festuca arundinacea*	55	X	FACU
2. *Trifolium fragiferum*	30	X	FAC
3. *Lotus corniculatus*	15		FAC
4. *Polypogon monspliensis*	t		FACW
5.			
6.			
7.			
8.			
Herb Stratum Total Cover: 100			
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-177

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	N 2.5/-	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-178**

Investigator(s) T. Harris, S. Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) field Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.747935 Long: -122.491359 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Unpaired sample point taken in representative FACU-dominated portion of field. Sample point lacks hydrophytic vegetation, hydric soils, and wetland hydrology, determined to be upland.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Trifolium fragiferum*	60	Y	FAC
2. *Festuca arundinacea*	40	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-178

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	N2.5/0	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators of wetland hydrology.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-179**

Investigator(s) T. Harris, S. Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) depression Local Relief (concave, convex, none) concave Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.748601 Long: -122.49192 Datum: WGS 84

Soil Map Unit Name Maxwell clay loam, 0 to 2 percent slopes NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Sample point taken in slight depression at edge of field. Sample point contains hydrophytic vegetation and has indicators of hydric soils and wetland hyrdrology. Boundary based on topography and shift in vegetation. Paired with SP-180.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Carex pragracilis*	60	Y	FACW
2. *Festuca arundinacea*	10	N	FACU
3. *Trifolium fragiferum*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	75		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 15

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets dominance test.

SOIL

Sampling Point SP-179

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	N 2.5/0	100					Clay	
6-12	N 2.5/0	75	2.5Y 4/1	20	D	M	Clay	
			5YR 4/6	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☒ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Meets multiple hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☒ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Sample point contains biotic crust and meets FAC-neutral test.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 6/20/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-180**

Investigator(s) Tanner Harris (WRA, Inc.) Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R6W

Landform (hillslope, terrace, etc.) field Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.748652 Long: -122.491871 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification none

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point taken adjacent to wetland depression in former agricultural field. Sample point contains indicators of hydric soils (possibly relict from previous flood irrigation), it does not contain hydrophytic vegetation or indicators of wetland hydrology. Sample point paired with SP-179.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Festuca arundinacea*	60	X	FACU
2. *Trifolium fragerifum*	39	X	FAC
3. *Polypogon monspliensis*	1		FACW
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-180

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-6	N 2.5/-	100					Clay	
6-12	N 2.5/-	85	2.5Y 4/1	10	D	M	Clay	
			5YR 4/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Meets hydric soil indicator F6, Redox Dark Surface. Redox potentially relict, from previous history of flood irrigation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-181**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) concave Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742011 Long: -122.490009 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Wetland sample point in hillslope seep. Boundary based on shift in vegetation and topography. Paired with SP-182.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' radius			
1. *Festuca perennis*	100	X	FAC
2. *Erythranthe microphylla*	t		OBL
3. *Rumex crispus*	t		FAC
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominace Test indicator.

SOIL

Sampling Point SP-181

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-4	10YR 2/1	100					Mucky gravelly	loam
4+								restrictive layer rock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: rock

Depth (inches): 4

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Meets hydric soil indicator F1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 1-0

Water table present? ☒ Yes ☐ No Depth (inches): surface

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary wetland hydrology indicators A1, A2, and A3.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-182**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 3

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742055 Long: -122.49 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland sample point on slope adjacent to seep. Paired with SP-181.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' radius			
1. *Bromus madratensis*	30	X	UPL
2. *Elymus caput-medusae*	30	X	NL
3. *Bromus hordeaceus*	25	X	FACU
4. *Chlorogalum pomeridianum*	1		NL
5. *Torilis arvensis*	1		NL
6. *Lactuca serriola*	1		FACU
7. *Geranium dissectum*	1		NL
8.			
Herb Stratum Total Cover:	89		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 1 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Litter 10%

No indicators met.

SOIL

Sampling Point SP-182

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	5YR 3/3	100					cobbly clay loam	
8+								restrictive rocky layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: rock

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-183**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) slight concave Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.743051 Long: -122.515067 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Seepy area/overflow from spring-fed cattle trough. Paired with SP-184. Boundary based on shift in vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Typha sp.*	10	X	OBL
2. *Epilobium ciliatum*	10	X	FACW
3. *Rumex crispus*	10	X	FAC
4. *Unknown grass*	5		unknown
5. *Festuca perennis*	3		FAC
6. *Lactuca serriola*	2		FACU
7.			
8.			
Herb Stratum Total Cover:	40		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Thatch 60%.

Meets Dominance Test indicator.

SOIL

Sampling Point SP-183

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-8	10YR 3/2	100					Loam	gravelly
8-12	10YR 3/2	100					Loam	gravels (mostly gravel)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils very dark; naturally problematic.

Soils assumed hydric based on obligate and faculative wetland vegetation and primary hydrology indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 1-2

Water table present? ☒ Yes ☐ No Depth (inches): 2-12

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-2

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators A1, A2, A3, and secondary hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-184**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) none Slope(%) 2

Subregion(LRR) LRR C (Medit. CA) Lat: 38.74315 Long: -122.515096 Datum: WGS 84

Soil Map Unit Name Still loam, stratified substratum NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☒ Yes ☐ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland paired with SP-183. Redox features potentially relict.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus diandrus*	30	X	NL
2. *Bromus hordeaceus*	30	X	FACU
3. *Festuca perennis*	10		FAC
4. *Lactuca serriola*	5		FACU
5. *Rumex crispus*	3		FAC
6. *Festuca bromoides*	2		FACU
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Thatch 20%

No indicators met.

SOIL

Sampling Point SP-184

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 3/2	95	7.5YR 3/4	5	C	M/PL	Clay	
6-12	10YR 3/1	70	7.5YR 3/4	20	C	M/PL	Clay	
	10YR 3/2	10						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Redox may be relict features from before spring was developed.

Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-185**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) slight concave Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742252 Long: -122.512136 Datum: WGS 84

Soil Map Unit Name Kelsey fine sandy loam NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☒ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Shallow ponded area in work yard on compacted soils and with strong hydrology indicators. Paired with SP186. Boundary based on shift in vegetation and slight shift in topography.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Lythrum hyssopifolium*	10	X	OBL
2. *Hordeum marinum ssp. gussoneanum*	10	X	FACW
3. *Veronica anagalis-aquatica*	10	X	OBL
4. *Poa secunda*	5		FACU
5. *Plagiobothrys sp.*	5		
6.			
7.			
8.			
Herb Stratum Total Cover:	40		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 60 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-185

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	2.5Y 3/2	100					Clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal (clay & gravel)

Depth (inches): 4

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Shallow inundated area on compacted fill. Redoxomorphic features on surface, but not visible in profile. Soils assumed hydric based on hydrophytic vegetation and primary hydrology indicators being met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☒ Surface Soil Cracks (B6)
- ☒ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators B6 and B7 and secondary indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-186**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) valley bottom Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742181 Long: -122.512063 Datum: WGS 84

Soil Map Unit Name Kelsey fine sandy loam NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland point paired with SP-185.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	50	X	FACU
2. *Hordeium murinum*	25	X	FACU
3. *Amsinckia sp.*	10		NL
4. *Trifolium hirtum*	5		NL
5. *Centaurea melitensis*	5		NL
6. *Cerastium arvense*	5		FACU
7.			
8.			
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species	x1
FACW species	x2
FAC species	x3
FACU species	x4
UPL species	x5
Column Totals (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-186

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	10YR 2/2	100					Clay loam	with gravel
4-12	10YR 3/2	100					Clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-187**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742669 Long: -122.502699 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Seep adjacent to stream. Paired with SP-188. Boundary based on shift in vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Hordeum brachyantherum*	40	X	FACW
2. *Festuca perennis*	10		FAC
3. *Carex serratodens*	10		FACW
4. *Juncus xiphioides*	10		OBL
5. *Sisyrinchium bellum*	5		FACW
6. *Elymus triticoides*	5		FAC
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-187

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-4	2.5Y 3/2	100					Clay	
4-5	2.5Y 2.5/1	100					Clay	burried horizon?
5-12	2.5Y 3/2	82	5GY 3/1	3	D	PL	Clay	
			7.5YR 3/4	5	C	M/PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2-4

Water table present? ☒ Yes ☐ No Depth (inches): 8-12

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-8

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators A1, A2, A3, and secondary hydrology indicators C9 and D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-188**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S3 T10N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.742625 Long: -122.50262 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland paired with SP-187.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	60	X	FACU
2. *Acmispon americanus*	15		UPL
3. *Bromus diandrus*	5		NL
4. *Erodium cicutarium*	t		NL
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 20 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-188

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-8	7.5YR 3/3	100					Clay loam	with gravels & cobbles
8+								rocky restrictive layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: shovel refusal (rocks)

Depth (inches): 8

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-189**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.743097 Long: -122.501005 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Hordeum brachyantherum patch at seepy area. Paired with SP-190. Boundary based on shift in vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Hordeum brachyantherum*	30	X	FACW
2. *Erythranthe microphylla*	20	X	OBL
3. *Triteleia peduncularis*	10		FACW
4. *Plagiobothrys sp.*	5		?
5. *Festuca microstachys*	5		NL
6.			
7.			
8.			
Herb Stratum Total Cover:	70		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 30 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-189

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-6	10YR 2/2	100					Loam	high concentration of gravel
6+								gravel restrictive layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: gravel

Depth (inches): 6

Hydric Soil Present ? ☒ **Yes** ☐ **No**

Remarks: Soils assumed hydric based on obligate and faculative wetland vegetation and primary hydrology indicators. Dark serpentine soils may be masking redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2

Water table present? ☒ Yes ☐ No Depth (inches): 4-6

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-4

Wetland Hydrology Present ? ☒ **Yes** ☐ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators A1, A2, A3, and secondary hydrology indicators C9 and D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-190**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S2 T10N R06W

Landform (hillslope, terrace, etc.) toe of slope Local Relief (concave, convex, none) none Slope(%) 5

Subregion(LRR) LRR C (Medit. CA) Lat: -122.501005 Long: -122.500932 Datum: WGS 84

Soil Map Unit Name Sobrante-Guenoc-Hambright complex, 15 to 30 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Hillside adjacent to seep. Paired with SP-189.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Hypochaeris glabra*	10	X	NL
2. *Festuca microstachys*	10	X	NL
3. *Acmispon wrangelianus*	5		NL
4. *Acmispon americanus*	5		UPL
5. *Hemizonia sp.*	5		?
6. *Trichostema lanceolatum*	3		FACU
7. *Chlorogalum pomeridianum*	2		NL
8. *Erythranthe microphylla*	t		OBL
Herb Stratum Total Cover:	40		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 60 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: No indicators met.

SOIL

Sampling Point SP-190

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-8	10YR 2/2	100					Clay	with gravel and cobble
8+								cobble / gravel restrictive layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: cobble / gravel

Depth (inches): 8

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-191**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S12 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.731022 Long: -122.481485 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☒ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Hillside seep above stream. Paired with SP-192. Boundary based on shift in vegetation.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Juncus xiphioides*	30	X	OBL
2. *Carex serratodens*	30	X	FACW
3. *Festuca perennis*	20	X	FAC
4. *Festuca arundinacea*	10		FACU
5. *Lotus corniculatus*	5		FAC
6. *Acmispon americanus*	3		UPL
7. *Lactuca saligna*	1		UPL
8. *Cirsium vulgare*	1		FACU
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator

SOIL

Sampling Point SP-191

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	2.5Y 3/1	95	10GY 3/1	5	D	M/PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils very dark. Naturally problomatic serpentine soils. Assumed hydric based on obligate and facultative wetland vegetation and primary hydrology indicators being met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 2-0

Water table present? ☒ Yes ☐ No Depth (inches): 12+

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-12

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Standing water in hoof marks. Soils saturated.

Meets primary hydrology indicators A1, A2, A3, and secondary hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/2/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-192**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S12 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.731002 Long: -122.481548 Datum: WGS 84

Soil Map Unit Name Sobrante-Hambright-Guenoc complex, 30 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland paired with SP-191.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	20	X	FACU
2. *Micropus californicus*	20	X	FACU
3. *Madia elegans*	15		NL
4. *Achyrachaena mollis*	15		FAC
5. *Lasthenia californica*	5		FACU
6. *Festuca perennis*	3		FAC
7. *Navarretia sp.*	2		?
8.			
Herb Stratum Total Cover:	80		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Thatch - 20%

No indicators met.

SOIL

Sampling Point SP-192

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-7	2.5Y 3/2	99	7.5YR 3/3	1	C	M	Clay loam	
7-12	2.5Y 3/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-193**

Investigator(s) Scott Yarger, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S12 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 4

Subregion(LRR) LRR C (Medit. CA) Lat: 38.720372 Long: -122.465969 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Seep wetland within Pinus sabiniana and Quercus wislizeni stand at toe of steeper slope. Paired with SP-194.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Eleocharis macrostachya*	30	X	OBL
2. *Helenium bigelovii*	30	X	FACW
3. *Nasturtium officinale*	15		OBL
4. *Festuca perennis*	5		FAC
5. *Polypogon sp.*	5		?
6. *Carex serratodens*	5		FACW
7.			
8.			
Herb Stratum Total Cover:	90		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Meets Dominance Test indicator.

SOIL

Sampling Point SP-193

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1	85	7.5YR 2.5/3	15	C	M/PL	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Meets hydric soil indicator F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 0

Water table present? ☒ Yes ☐ No Depth (inches): 0

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Meets primary hydrology indicators A1, A2, and A3 and secondary hydrology indicator D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-194**

Investigator(s) Scott Yarger, Rhiannon Korhummel (WRA, Inc.) Section,Township,Range S12 T10N R06W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) convex Slope(%) 15

Subregion(LRR) LRR C (Medit. CA) Lat: 38.720343 Long: -122.465929 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland on hillslope. Paired with SP-193.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 25' radius	Absolute % cover	Dominant Species?	Indicator Status
1. *Pinus sabiniana*	15	X	NL
2. *Quercus douglasii*	5	X	NL
3.			
4.			
Tree Stratum Total Cover:	20		
SAPLING/SHRUB STRATUM **Plot Size:** 10' radius			
1. *Frangula californica*	5	X	NL
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	5		
HERB STRATUM **Plot Size:** 10' x 10'			
1. *Festuca bromoides*	50	X	FACU
2. *Ranunculus californicus*	5		FACU
3. *Sanicula crassicaulis*	5		NL
4. *Elymus glaucus*	1		FACU
5. *Acmispon sp.*	t		UPL/NL
6. *Trifolium bifidum*	t		NL
7. *Aira caryophyllea*	t		NL
8.			
Herb Stratum Total Cover:	61		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 0 (A)

Total number of dominant species across all strata? 4 (B)

% of dominant species that are OBL, FACW, or FAC? 0 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:	
OBL species	x1	
FACW species	x2	
FAC species	x3	
FACU species	x4	
UPL species	x5	
Column Totals	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Litter 39%

No indicators met.

SOIL

Sampling Point SP-194

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	7.5YR 3/3	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches):

Hydric Soil Present ? ☐ **Yes** ☒ **No**

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches):

Water table present? ☐ Yes ☒ No Depth (inches):

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches):

Wetland Hydrology Present ? ☐ **Yes** ☒ **No**

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-195**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S18 T10N R05W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 10

Subregion(LRR) LRR C (Medit. CA) Lat: 38.718514 Long: -122.460659 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: Hillside seep. Boundary based on hydrophytic vegetation, aerial signatures, and extent of soil saturation. Paired with SP-196.

VEGETATION (use scientific names)

TREE STRATUM Plot Size: 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM Plot Size: 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM Plot Size: 5' x 5'			
1. *Eleocharis macrostachya*	35	X	OBL
2. *Juncus xiphioides*	20	X	OBL
3. *Toxicoscordion fremontii*	10		NL
4. *Melilotus indicus*	10		FACU
5. *Acmispon sp.*	10		?
6. *Sisyrinchium bellum*	10		FACW
7. *Trifolium variegatum*	3		FAC
8. *Lysimachia arvensis*	3		NL
Herb Stratum Total Cover:	100		
WOODY VINE STRATUM Plot Size: 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Herb stratum cont.: Lactuca saligna 2% UPL

Meets Dominance Test indicator.

SOIL

Sampling Point SP-195

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-5	7.5YR 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: cobble

Depth (inches): 5

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Soils assumed hydric based on dominance of obligate wetland vegetation and strong primary hydrology indicators.

Dark red soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☒ Yes ☐ No Depth (inches): 0.25-0

Water table present? ☒ Yes ☐ No Depth (inches): 2-5

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 0-2

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Thin layer of surfce water at seepy spots and around rocks.

Meets primary wetland hydrology indicators A1, A2, A3 and secondary hydrology indicator C9 and D5.

Wetland Determination Data Form - Arid West Region

Project/Site Guenoc Valley Development City _____ County Lake Sampling Date 5/7/2019

Applicant/Owner Lotusland Investment Holdings, Inc. State CA Sampling Point **SP-196**

Investigator(s) Tanner Harris (WRA, Inc.), Scott Batiuk (WRA, Inc.) Section,Township,Range S18 T10N R05W

Landform (hillslope, terrace, etc.) hillslope Local Relief (concave, convex, none) none Slope(%) 0

Subregion(LRR) LRR C (Medit. CA) Lat: 38.718595 Long: -122.460767 Datum: WGS 84

Soil Map Unit Name Henneke-Montara-Rock outcrop complex, 15 to 50 percent slopes NWI classification _____

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

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

Hydrophytic Vegetation Present? ☐ Yes ☒ No

Hydric Soil Present? ☐ Yes ☒ No

Wetland Hydrology Present? ☐ Yes ☒ No

Is the Sampled Area within a Wetland? ☐ **Yes** ☒ **No**

Remarks: Upland adjacent to seep paired with SP-195.

VEGETATION (use scientific names)

TREE STRATUM **Plot Size:** 0	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
SAPLING/SHRUB STRATUM **Plot Size:** 0			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
HERB STRATUM **Plot Size:** 5' x 5'			
1. *Bromus hordeaceus*	25	X	FACU
2. *Festuca perennis*	25	X	FAC
3. *Medicago polymorpha*	10		FACU
4. *Melilotus indicus*	10		FACU
5. *Acmispon cf. wrangelianus*	4		NL
6. *Erodium cicutarium*	3		NL
7. *Geranium dissectum*	2		NL
8. *Elymus caput-medusae*	1		NL
Herb Stratum Total Cover:	85		
WOODY VINE STRATUM **Plot Size:** 0			
1.			
2.			
Woody Vines Total Cover:			

% Bare ground in herb stratum 0 % cover of biotic crust 0

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:	Multiply by:
OBL species _____	x1 _____
FACW species _____	x2 _____
FAC species _____	x3 _____
FACU species _____	x4 _____
UPL species _____	x5 _____
Column Totals _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Herb stratum cont.: Lactuca saligna 1% UPL, Holocarpha virgata 1% NL, Sonchus oleraceus 1% UPL, Hordeum murinum 1% FACU, Avena sp. 1% UPL

No indicators met.

SOIL

Sampling Point SP-196

Profile description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-10	7.5YR 3/3	100					Clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)(LRR C)
- ☐ 1cm Muck (A9)(LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1cm Muck (A9) (LRR C)
- ☐ 2cm Muck (A10)(LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: gravel

Depth (inches): 10

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No indicators met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)(Nonriverine)
- ☐ Sediment Deposits (B2)(Nonriverine)
- ☐ Drift Deposits (B3)(Nonriverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in PLowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1)(Riverine)
- ☐ Sediment Deposits (B2)(Riverine)
- ☐ Drift Deposits (B3)(Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ Yes ☒ No Depth (inches): _____

Water table present? ☐ Yes ☒ No Depth (inches): _____

Saturation Present? (includes capillary fringe) ☐ Yes ☒ No Depth (inches): _____

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: No indicators met.

APPENDIX D

STUDY AREA PHOTOGRAPHS

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Photo 1. Example of forested wetland along Bucksnort Creek.

Photo 2. Example of forested wetland along Bucksnort Creek.

Photo 3. Example of scrub-shrub wetland within the Study Area.

Photo 4. Example of scrub-shrub wetland along Butts Creek.

Photo 5. Example of a seasonal wetland depression within the Study Area.

Photo 6. Example of a seasonal wetland depression within the Study Area.

Photo 7. Example of a seasonal wetland ditch within the Study Area.

Photo 8. Example of a seasonal wetland ditch within the Study Area.

Photo 9. Example of seasonal wetland pond fringe within the Study Area.

Photo 10. Example of seasonal wetland pond fringe within the Study Area.

Photo 11. Example of a seasonal wetland seep/swale within the Study Area.

Photo 12. Example of a seasonal wetland seep/swale within the Study Area.

Photo 13. Example of a seasonal wetland wet meadow within the Study Area.

Photo 14. Example of a seasonal wetland wet meadow within the Study Area.

Photo 15. Example of a stream fringe/in-stream wetland within the Study Area.

Photo 16. Example of a stream fringe/in-stream wetland within the Study Area.

Photo 17. Example of an ephemeral ditch within the Study Area.

Photo 18. Example of an ephemeral ditch within the Study Area.

Photo 19. Example of an ephemeral stream within the Study Area.

Photo 20. Example of an ephemeral stream within the Study Area.

Photo 21. Example of an intermittent stream (McCain Creek) within the Study Area.

Photo 22. Example of an intermittent stream (Butcherknife Creek) within the Study Area.

Photo 23. Example of a perennial stream (Putah Creek) within the Study Area.

Photo 24. Example of a perennial stream (Bucksnort Creek) within the Study Area.

Photo 25. Example of open water (Upper Bohn Lake) within the Study Area.

Photo 26. Example of open water (Lower Bohn Lake) within the Study Area.

APPENDIX E

PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

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Appendix E. List of Plant Species Observed within Guenoc Ranch

Surveys were conducted by WRA biologists between 2017 and 2019. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2019).

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Acer macrophyllum	Bigleaf maple	native	tree	-	-	FAC	-
Achillea millefolium	Yarrow	native	perennial herb	-	-	FACU	-
Achyrachaena mollis	Blow wives	native	annual herb	-	-	FAC	-
Acmispon americanus var. *americanus*	Spanish lotus	native	annual herb	-	-	UPL	-
Acmispon brachycarpus	Short podded lotus	native	annual herb	-	-	-	-
Acmispon glaber var. *glaber*	Deerweed	native	perennial herb	-	-	-	-
Acmispon parviflorus	Hill lotus	native	annual herb	-	-	-	-
Acmispon wrangelianus	Chilean trefoil	native	annual herb	-	-	-	-
Adenostoma fasciculatum var. *fasciculatum*	Chamise	native	tree, shrub	-	-	-	-
Adiantum jordanii	California maidenhair fern	native	fern	-	-	FAC	-
Aegilops triuncialis	Goatgrass	non-native (invasive)	annual grass	-	High	-	-
Aesculus californica	Buckeye	native	tree	-	-	-	-
Agoseris grandiflora var. *grandiflora*	Giant mountain dandelion	native	perennial herb	-	-	-	-
Agoseris heterophylla var. *cryptopleura*	Mountain dandelion	native	annual herb	-	-	-	-
Agoseris heterophylla var. *heterophylla*	Annual agoseris	native	annual herb	-	-	-	-
Agrostis avenacea	Pacific bentgrass	non-native (invasive)	perennial grass	-	Limited	FACW	-
Agrostis stolonifera	Redtop	non-native (invasive)	perennial grass	-	Limited	FACW	-
Aira caryophyllea	Silvery hairgrass	non-native	annual grass	-	-	FACU	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Alisma lanceolatum	Water plantain	non-native	perennial herb (aquatic)	-	-	OBL	-
Allium amplectens	Narrow leaved onion	native	perennial herb (bulb)	-	-	-	2.3
Allium falcifolium	Sickle leaf onion	native	perennial herb (bulb)	-	-	-	4.2
Allium fimbriatum var. *fimbriatum*	Fringed onion	native	perennial herb (bulb)	-	-	-	-
Allium serra	Jeweled onion	native	perennial herb (bulb)	-	-	-	2.6
Alnus rhombifolia	White alder	native	tree	-	-	FACW	-
Alopecurus pratensis	Meadow foxtail	non-native	perennial grass	-	Watch	FACW	-
Amaranthus retroflexus	Rough pigweed	non-native	annual herb	-	-	FACU	-
Amsinckia intermedia	Common fiddleneck	native	annual herb	-	-	-	-
Amsinckia lycopsoides	Tarweed fiddleneck	native	annual herb	-	-	-	-
Amsinckia menziesii	Fiddleneck	native	annual herb	-	-	-	-
Amsinckia retrorsa	Rigid fiddleneck	native	annual herb	-	-	-	-
Ancistrocarphus filagineus	Woolly fishhooks	native	annual herb	-	-	-	3.3
Angelica californica	California angelica	native	perennial herb	-	-	-	-
Angelica tomentosa	Woolly angelica	native	perennial herb	-	-	-	2.7
Anisocarpus madioides	Woodland madia	native	perennial herb	-	-	-	-
Anthemis cotula	Dog fennel	non-native	annual herb	-	-	FACU	-
Antirrhinum vexillocalyculatum ssp. *vexillocalyculatum*	Wiry snapdragon	native	annual herb	-	-	-	-
Antirrhinum virga	Tall snapdragon	native	perennial herb	Rank 4.3	-	-	2.8
Aphanes occidentalis	Ladie's mantle	native	annual, perennial herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Apiastrum angustifolium	Wild celery	native	annual herb	-	-	UPL	1.5
Aphyllon fasciculatum	Clustered broomrape	native	perennial herb (parasitic)	-	-	-	-
Apocynum cannabinum	Indian hemp	native	perennial herb	-	-	FAC	-
Aquilegia eximia	Serpentine columbine	native	perennial herb	-	-	OBL	4.2
Arbutus menziesii	Madrone	native	tree	-	-	-	-
Arceuthobium campylopodum	Pine dwarf mistletoe	native	perennial herb (parasitic)	-	-	-	-
Arctostaphylos glandulosa ssp. *cushingiana*	Cushing manzanita	native	shrub	-	-	-	-
Arctostaphylos manzanita ssp. *elegans*	Konocti manzanita	native	shrub	Rank 1B.3	-	-	-
Arctostaphylos manzanita ssp. *manzanita*	Common manzanita	native	shrub	-	-	-	-
Arctostaphylos viscida ssp. *pulchella*	White leaf manzanita	native	tree, shrub	-	-	-	5
Arctostaphylos viscida ssp. *viscida*	Smooth white leaf manzanita	native	tree, shrub	-	-	-	2.2
Arnica discoidea	Rayless arnica	native	perennial herb	-	-	-	-
Artemisia douglasiana	California mugwort	native	perennial herb	-	-	FAC	-
Asclepias cordifolia	Purple milkweed	native	perennial herb	-	-	-	-
Asclepias eriocarpa	Indian milkweed	native	perennial herb	-	-	-	-
Asclepias fascicularis	Milkweed	native	perennial herb	-	-	FAC	-
Aspidotis densa	Lace fern	native	fern	-	-	-	3.4
Astragalus breweri	Brewer's milk vetch	native	annual herb	Rank 4.2	-	-	3.2
Astragalus clevelandii	Cleveland's milk vetch	native	perennial herb	Rank 4.3	-	FAC	6.1
Astragalus gambelianus	Gambel's dwarf milk vetch	native	annual herb	-	-	-	-
Astragalus rattanii var. *jepsonianus*	Jepson's milk vetch	native	annual herb	Rank 1B.2	-	-	4.3

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Athyrium filix-femina var. *cyclosorum*	Western lady fern	native	fern	-	-	FAC	-
Athysanus pusillus	Dwarf athysanus	native	annual herb	-	-	-	-
Avena barbata	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate	-	-
Avena fatua	Wildoats	non-native (invasive)	annual grass	-	Moderate	-	-
Baccharis pilularis ssp. *consanguinea*	Coyote brush	native	shrub	-	-	-	-
Baccharis salicifolia ssp. *salicifolia*	Mule fat	native	shrub	-	-	FAC	-
Balsamorhiza macrolepis	Big scale balsam root	native	perennial herb	Rank 1B.2	-	-	-
Barbarea vulgaris	Yellow rocket	non-native	perennial herb	-	-	FAC	-
Bellardia trixago	Mediterranean lineseed	non-native (invasive)	annual herb	-	Limited	-	-
Brickellia californica	California brickellia	native	perennial herb	-	-	FACU	-
Briza maxima	Rattlesnake grass	non-native (invasive)	annual grass	-	Limited	-	-
Briza minor	Little rattlesnake grass	non-native	annual grass	-	-	FAC	-
Brodiaea elegans ssp. *elegans*	Harvest brodiaea	native	perennial herb	-	-	FACU	-
Brodiaea leptandra	Narrow-anthered brodiaea	native	perennial herb	Rank 1B.2	-	-	-
Bromus carinatus var. *carinatus*	California brome	native	perennial grass	-	-	-	-
Bromus diandrus	Ripgut brome	non-native (invasive)	annual grass	-	Moderate	-	-
Bromus hordeaceus	Soft chess	non-native (invasive)	annual grass	-	Limited	FACU	-
Bromus laevipes	Narrow flowered brome	native	annual, perennial grass	-	-	-	1.7

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Bromus madritensis ssp. *madritensis*	Foxtail chess	non-native	annual grass	-	-	UPL	-
Bromus madritensis ssp. *rubens*	Foxtail brome	non-native (invasive)	annual grass	-	High	UPL	-
Calandrinia menziesii	Red maids	native	annual herb	-	-	FACU	-
Callitriche heterophylla var. *bolanderi*	Bolander's water starwort	native	annual herb	-	-	OBL	-
Calochortus amabilis	Golden fairy lantern	native	perennial herb	-	-	-	-
Calochortus luteus	Yellow mariposa	native	perennial herb	-	-	-	-
Calochortus splendens	Splendid mariposa	native	perennial herb	-	-	-	-
Calochortus tolmiei	Hairy star tulip	native	perennial herb	-	-	-	-
Calochortus uniflorus	Large flowered star tulip	native	perennial herb	Rank 4.2	-	FACW	1.7
Calochortus vestae	Yellow mariposa	native	perennial herb	-	-	-	2
Calycadenia fremontii	Fremont's calycadenia	native	annual herb	-	-	-	-
Calycadenia pauciflora	Small flowered calycadenia	native	annual herb	-	-	-	5.3
Calycanthus occidentalis	Spicebush	native	shrub	-	-	FAC	-
Calystegia collina ssp. *collina*	Hillside morning glory	native	perennial herb	-	-	-	4.7
Calystegia collina ssp. *oxyphylla*	Mt. Saint Helena morning glory	native	perennial herb (rhizomatous)	Rank 4.2	-	-	5.6
Calystegia occidentalis ssp. *occidentalis*	Modoc morning glory	native	perennial herb	-	-	-	-
Calystegia purpurata ssp. *purpurata*	Smooth western morning glory	native	perennial herb	-	-	-	-
Camissoniopsis intermedia	Intermediate sun cups	native	annual herb	-	-	-	-
Campanula angustiflora	Eastwood's harebell	native	annual herb	-	-	-	3.9
Capsella bursa-pastoris	Shepherd's purse	non-native	annual herb	-	-	FACU	-
Cardamine hirsuta	Hairy bitter cress	non-native	annual herb	-	-	FACU	-

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Cardamine oligosperma	Idaho bittercress	native	annual, perennial herb	-	-	FAC	-
Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	non-native (invasive)	annual herb	-	Moderate	-	-
Carex barbarae	Valley sedge	native	perennial grasslike herb	-	-	FAC	-
Carex densa	Dense sedge	native	perennial grasslike herb	-	-	OBL	-
Carex multicaulis	Forest sedge	native	perennial grasslike herb	-	-	-	-
Carex nudata	Torrent sedge	native	perennial grasslike herb	-	-	FACW	-
Carex pellita	Woolly sedge	native	perennial grasslike herb	-	-	OBL	-
Carex praegracilis	Field sedge	native	perennial grasslike herb	-	-	FACW	-
Carex serratodens	Bifid sedge	native	perennial grasslike herb	-	-	FACW	4.9
Carex tumulicola	Split awn sedge	native	perennial grasslike herb	-	-	FACU	-
Castilleja affinis ssp. *affinis*	Coast Indian paint brush	native	perennial herb	-	-	-	-
Castilleja applegatei ssp. *martinii*	Martin's paintbrush	native	perennial herb	-	-	-	-
Castilleja attenuata	Narrow leaved owl's clover	native	annual herb	-	-	-	-
Castilleja densiflora ssp. *densiflora*	Dense flower owl's clover	native	annual herb	-	-	-	-
Castilleja exserta ssp. *exserta*	Purple owl's clover	native	annual herb	-	-	-	-
Castilleja foliolosa	Texas paintbrush	native	perennial herb	-	-	-	2.3
Castilleja minor	Little paintbrush	native	annual herb	-	-	OBL	-
Castilleja rubicundula ssp. *lithospermoides*	Cream sacs	native	annual herb	-	-	-	2.4
Caulanthus lasiophyllus	California mustard	native	annual herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Ceanothus cuneatus var. *cuneatus*	Buck brush	native	shrub	-	-	-	1.5
Ceanothus foliosus var. *foliosus*	Wavy leaved ceanothus	native	shrub	-	-	-	-
Ceanothus integerrimus var. *macrothyrsus*	Deerbrush	native	shrub	-	-	-	-
Ceanothus jepsonii	Musk brush	native	shrub	-	-	-	6
Centaurea calcitrapa	Purple star thistle	non-native (invasive)	annual, perennial herb	-	Moderate	-	-
Centaurea melitensis	Tocalote	non-native (invasive)	annual herb	-	Moderate	-	-
Centaurea solstitialis	Yellow starthistle	non-native (invasive)	annual herb	-	High	-	-
Centromadia fitchii	Spikeweed	native	annual herb	-	-	FACU	-
Cephalanthus occidentalis	Common buttonbush	native	shrub	-	-	OBL	-
Cerastium glomeratum	Large mouse ears	non-native	annual herb	-	-	UPL	-
Cercis occidentalis	Western redbud	native	tree, shrub	-	-	-	-
Cercocarpus betuloides var. *betuloides*	Birch leaf mountain mahogany	native	tree, shrub	-	-	-	-
Chaenactis glabriuscula var. *heterocarpha*	Variable fruited yellow chaenactis	native	annual herb	-	-	-	2.5
Chenopodium album	Lambs quarters	non-native	annual herb	-	-	FACU	-
Chlorogalum pomeridianum var. *pomeridianum*	Common soaproot	native	perennial herb	-	-	-	-
Chorizanthe membranacea	Pink spineflower	native	annual herb	-	-	-	-
Chorizanthe polygonoides var. *polygonoides*	Knotweed spineflower	native	annual herb	-	-	-	-
Cichorium intybus	Chicory	non-native	perennial herb	-	-	FACU	-
Cirsium cymosum var. *cymosum*	Peregrine thistle	native	perennial herb	-	-	-	-
Cirsium douglasii	Swamp thistle	native	perennial herb	-	-	OBL	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Cirsium occidentale var. *venustum*	Coulter's thistle	native	perennial herb	-	-	-	-
Cirsium vulgare	Bullthistle	non-native (invasive)	perennial herb	-	Moderate	FACU	-
Clarkia amoena ssp. *huntiana*	Farewell to spring	native	annual herb	-	-	-	-
Clarkia concinna ssp. *concinna*	Red ribbons	native	annual herb	-	-	-	-
Clarkia gracilis ssp. *tracyi*	Tracy's clarkia	native	annual herb	Rank 4.2	-	-	5
Clarkia purpurea ssp. *quadrivulnera*	Purple clarkia	native	annual herb	-	-	-	-
Clarkia rhomboidea	Tongue clarkia	native	annual herb	-	-	-	-
Clarkia unguiculata	Woodland clarkia	native	annual herb	-	-	-	-
Claytonia exigua ssp. *exigua*	Serpentine springbeauty	native	annual herb	-	-	-	3.4
Claytonia parviflora ssp. *parviflora*	Miner'slettuce	native	annual herb	-	-	FACU	-
Claytonia perfoliata ssp. *perfoliata*	Miner's lettuce	native	annual herb	-	-	FAC	-
Clematis lasiantha	Pipestem	native	perennial herb, vine	-	-	-	-
Clematis ligusticifolia	Creek clematis	native	perennial herb, vine	-	-	FAC	-
Collinsia greenei	Greene's collinsia	native	annual herb	-	-	-	5.2
Collinsia heterophylla var. *heterophylla*	Purple chinese houses	native	annual herb	-	-	-	-
Collinsia sparsiflora var. *sparsiflora*	Few flowered collinsia	native	annual herb	-	-	-	-
Collomia diversifolia	Serpentine collomia	native	annual herb	Rank 4.3	-	-	5.6
Collomia heterophylla	Varied leaved collomia	native	annual herb	-	-	-	-
Convolvulus arvensis	Field bindweed	non-native	perennial herb, vine	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Cordylanthus pilosus ssp. *pilosus*	Hairy bird's beak	native	annual herb	-	-	-	-
Cordylanthus tenuis ssp. *brunneus*	Serpentine bird's beak	native	annual herb (hemiparasitic)	Rank 4.3	-	-	5.1
Cornus nuttallii	Mountain dogwood	native	shrub	-	-	FACU	-
Cornus sericea ssp. *occidentalis*	Western dogwood	native	shrub	-	-	FACW	-
Crassula aquatica	Aquatic pygmy weed	native	annual herb	-	-	OBL	-
Crassula connata	Sand pygmy weed	native	annual herb	-	-	FAC	-
Crassula tillaea	Mediterranean pygmy weed	non-native	annual herb	-	-	FACU	-
Crocanthemum scoparium	Peak rush-rose	native	shrub	-	-	-	-
Croton setiger	Turkey-mullein	native	perennial herb	-	-	-	-
Crypsis sp.	Prickle grass	non-native	annual grass	-	-	FACW-OBL-	-
Cryptantha flaccida	Beaked cryptantha	native	annual herb	-	-	-	1.6
Cryptantha hispidula	Napa cryptantha	native	annual herb	-	-	-	6
Cuscuta brachycalyx	San joaquin dodder	native	annual herb, vine (parasitic)	-	-	-	-
Cynodon dactylon	Bermuda grass	non-native (invasive)	perennial grass	-	Moderate	FACU	-
Cynoglossum grande	Houndstongue	native	perennial herb	-	-	-	-
Cynosurus echinatus	Dogtail grass	non-native (invasive)	annual grass	-	Moderate	-	-
Cyperus eragrostis	Tall cyperus	native	perennial grasslike herb	-	-	FACW	-
Cytisus scoparius	Scotch broom	non-native (invasive)	shrub	-	High	-	-
Dactylis glomerata	Orchardgrass	non-native (invasive)	perennial grass	-	Limited	FACU	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Damasonium californicum	California damsonium	native	perennial herb (aquatic)	-	-	OBL	-
Danthonia californica	California oatgrass	native	perennial grass	-	-	FAC	-
Datisca glomerata	Durango root	native	perennial herb	-	-	FACW	-
Datura stramonium	Jimson weed	non-native	annual herb	-	-	-	-
Daucus pusillus	Wild carrot	native	annual herb	-	-	-	-
Delphinium hesperium ssp. *pallescens*	Western larkspur	native	perennial herb	-	-	FAC	-
Delphinium nudicaule	Canyon larkspur	native	perennial herb	-	-	-	-
Delphinium uliginosum	Swamp larkspur	native	perennial herb	Rank 4.2	-	OBL	5.7
Delphinium variegatum ssp. *variegatum*	Royal larkspur	native	perennial herb	-	-	-	-
Dendromecon rigida	Bush poppy	native	shrub	-	-	-	-
Deschampsia cespitosa ssp. *cespitosa*	Tufted hairgrass	native	perennial grass	-	-	FACW	-
Deschampsia danthonioides	Annual hairgrass	native	annual grass	-	-	FACW	-
Dichelostemma capitatum ssp. *capitatum*	Wild hyacinth	native	perennial herb	-	-	FACU	-
Dichelostemma congestum	Fork toothed ookow	native	perennial herb	-	-	-	-
Digitaria sanguinalis	Crabgrass	non-native	annual grass	-	-	FACU	-
Diplacus aurantiacus	Sticky monkeyflower	native	shrub	-	-	FACU	-
Diplacus congdonii	Congdon's monkeyflower	native	annual herb	-	-	FAC	-
Diplacus douglasii	Purple mouse ears	native	annual herb	-	-	FACW	2.7
Diplacus kelloggii	Kellogg's monkeyflower	native	annual herb	-	-	-	-
Diplacus tricolor	Tricolor monkeyflower	native	annual herb	-	-	OBL	-
Downingia concolor var. *concolor*	Spotted throat downingia	native	annual herb	-	-	OBL	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Downingia cuspidata	Toothed downingia	native	annual herb	-	-	OBL	-
Drymocallis glandulosa	Sticky cinquefoil	native	perennial herb	-	-	FAC	-
Dryopteris arguta	Wood fern	native	fern	-	-	-	-
Dudleya cymosa ssp. *cymosa*	Canyon dudleya	native	perennial herb	-	-	-	-
Echinochloa crus-galli	Barnyard grass	non-native	annual grass	-	-	FACW	-
Ehrendorferia chrysantha	Golden eardrops	native	perennial herb	-	-	-	1.1
Eleocharis acicularis	Needle spikerush	native	perennial grasslike herb	-	-	OBL	-
Eleocharis macrostachya	Spike rush	native	perennial grasslike herb	-	-	OBL	-
Elymus caput-medusae	Medusa head	non-native (invasive)	annual grass	-	High	-	-
Elymus elymoides var. *elymoides*	Squirrel tail grass	native	perennial grass	-	-	FACU	-
Elymus glaucus ssp. *glaucus*	Blue wild rye	native	perennial grass	-	-	FACU	-
Elymus multisetus	Big squirreltail grass	native	perennial grass	-	-	-	-
Elymus triticoides	Beardless wild rye	native	perennial grass	-	-	FAC	-
Epilobium brachycarpum	Willow herb	native	annual herb	-	-	-	-
Epilobium campestre	Smooth boisduvalia	native	annual herb	-	-	OBL	-
Epilobium canum ssp. *canum*	California fuchsia	native	perennial herb	-	-	-	-
Epilobium ciliatum	Slender willow herb	native	perennial herb	-	-	FACW	-
Epilobium densiflorum	Willow herb	native	annual herb	-	-	FACW	-
Epilobium minutum	Minute willowherb	native	annual herb	-	-	FACU	2
Epilobium torreyi	Narrow boisduvalia	native	annual herb	-	-	FACW	-
Epipactis gigantea	Stream orchid	native	perennial herb	-	-	OBL	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Equisetum hyemale ssp. *affine*	Giant scouring rush	native	fern	-	-	FACW	-
Equisetum laevigatum	Smooth scouring rush	native	fern	-	-	FACW	-
Ericameria arborescens	Golden fleece	native	shrub	-	-	-	1.3
Erigeron canadensis	Canada horseweed	native	annual herb	-	-	FACU	-
Erigeron greenei	Greene's narrow-leaved daisy	native	perennial herb	Rank 1B.2	-	-	-
Erigeron philadelphicus var. *philadelphicus*	Philadelphia fleabane	native	perennial herb	-	-	FACU	-
Eriodictyon californicum	Yerba santa	native	shrub	-	-	-	-
Eriogonum luteolum var. *luteolum*	Golden buckwheat	native	annual herb	-	-	-	3.8
Eriogonum nudum var. *nudum*	Nude buckwheat	native	shrub	-	-	-	-
Eriophyllum lanatum var. *achilleoides*	Yarrow leaved woolly sunflower	native	perennial herb	-	-	-	-
Erodium botrys	Big heron bill	non-native	annual herb	-	-	FACU	-
Erodium brachycarpum	White stemmed filaree	non-native	annual herb	-	-	-	-
Erodium cicutarium	Red stemmed filaree	non-native (invasive)	annual herb	-	Limited	-	-
Erodium moschatum	Whitestem filaree	non-native	annual herb	-	-	-	-
Eryngium aristulatum var. *aristulatum*	Jepson's button celery	native	perennial herb	-	-	OBL	-
Erythranthe guttata	Seep monkeyflower	native	perennial herb (rhizomatous)	-	-	OBL	-
Erythranthe latidens	Broad toothed monkeyflower	native	annual herb	-	-	OBL	-
Erythranthe microphylla	Seep monkeyflower	native	annual herb	-	-	OBL	-
Erythranthe nudata	Bare monkeyflower	native	annual herb	Rank 4.3	-	OBL	5.6
Erythronium helenae	St. Helena fawn lily	native	perennial herb (bulb)	Rank 4.2	-	-	4.5
Eschscholzia caespitosa	Tufted poppy	native	annual herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Eschscholzia californica	California poppy	native	annual, perennial herb	-	-	-	-
Eucalyptus camaldulensis	Red gum	non-native (invasive)	tree	-	Limited	FAC	-
Euphorbia serpyllifolia	Thyme-leaved spurge	native	annual herb	-	-	-	-
Euphorbia spathulata	Reticulate seeded spurge	native	annual herb	-	-	FAC	-
Eurybia radulina	Roughleaf aster	native	perennial herb				
Euthamia occidentalis	Western goldenrod	native	perennial herb	-	-	FACW	-
Festuca arundinacea	Reed fescue	non-native (invasive)	perennial grass	-	Moderate	FACU	-
Festuca bromoides	Brome fescue	non-native	annual grass	-	-	FACU	-
Festuca californica	California fescue	native	perennial grass	-	-	FACU	2.4
Festuca idahoensis	Blue fescue	native	perennial grass	-	-	FACU	1.3
Festuca microstachys	Small fescue	native	annual grass	-	-	-	-
Festuca myuros	Rattail sixweeks grass	non-native (invasive)	annual grass	-	Moderate	FACU	-
Festuca perennis	Italian rye grass	non-native (invasive)	annual, perennial grass	-	Moderate	FAC	-
Ficus carica	Common fig	non-native (invasive)	tree	-	Moderate	FACU	-
Frangula californica ssp. *tomentella*	Hoary coffeeberry	native	shrub	-	-	-	1.5
Fraxinus dipetala	Two petaled ash	native	tree, shrub	-	-	-	-
Fraxinus latifolia	Oregon ash	native	tree	-	-	FACW	-
Fritillaria affinis	Checker lily	native	perennial herb (bulb)	-	-	-	2
Fritillaria purdyi	Purdy's fritillary	native	perennial herb (bulb)	Rank 4.3	-	-	4.5

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Fritillaria recurva	Scarlet fritillary	native	perennial herb	-	-	-	-
Galium andrewsii ssp. *andrewsii*	Phlox leaved bedstraw	native	perennial herb	-	-	-	3.2
Galium aparine	Cleavers	native	annual herb	-	-	FACU	-
Galium bolanderi	Bolander's bedstraw	native	perennial herb	-	-	-	-
Galium californicum	California bedstraw	native	perennial herb	-	-	-	-
Galium murale	Tiny bedstraw	non-native	annual herb	-	-	-	-
Galium parisiense	Wall bedstraw	non-native	annual herb	-	-	UPL	-
Galium porrigens var. *porrigens*	Graceful bedstraw	native	vine, shrub	-	-	-	-
Galium porrigens var. *tenue*	Graceful bedstraw	native	vine, shrub	-	-	-	-
Garrya congdonii	Silk tassel	native	shrub	-	-	-	5
Gastridium phleoides	Nit grass	non-native	annual grass	-	-	FACU	-
Genista monspessulana	French broom	non-native (invasive)	shrub	-	High	-	-
Geranium dissectum	Wild geranium	non-native (invasive)	annual herb	-	Limited	-	-
Geranium molle	Crane's bill geranium	non-native	annual, perennial herb	-	-	-	-
Gilia capitata ssp. *capitata*	Blue field gilia	native	annual herb	-	-	-	1.6
Gilia clivorum	Purple spot gilia	native	annual herb	-	-	-	-
Gilia tricolor ssp. *diffusa*	Bird's eyes	native	annual herb	-	-	-	-
Githopsis specularioides	Venus' looking glass	native	annual herb	-	-	FACU	-
Glyceria declinata	Waxy mannagrass	non-native (invasive)	perennial grass	-	Moderate	FACW	-
Glycyrrhiza glabra	Licorice	non-native	perennial herb	-	-	-	-
Glycyrrhiza lepidota	American licorice	native	perennial herb	-	-	FAC	-
Gnaphalium palustre	Lowland cudweed	native	annual herb	-	-	FACW	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Gratiola ebracteata	Common hedge hyssop	native	annual herb	-	-	OBL	-
Grindelia hirsutula	Gumweed	native	perennial herb	-	-	FACW	1.4
Helenium bigelovii	Bigelow's sneezeweed	native	perennial herb	-	-	FACW	2.9
Helenium puberulum	Sneezeweed	native	perennial herb	-	-	FACW	-
Helianthella californica var. *californica*	California helianthella	native	perennial herb	-	-	-	-
Helianthus exilis	Serpentine sunflower	native	annual herb	Rank 4.2	-	FACU	5.7
Heliotropium curassavicum var. *oculatum*	Seaside heliotrope	native	perennial herb	-	-	FACU	-
Helminthotheca echioides	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited	FAC	-
Hemizonia congesta ssp. *clevelandii*	Cleveland's tarweed	native	annual herb	-	-	-	-
Hesperevax sparsiflora var. *sparsiflora*	Few flowered evax	native	annual herb	-	-	FACU	1.8
Hesperocyparis sargentii	Sargent cypress	native	tree, shrub	-	-	-	4.9
Hesperolinon bicarpellatum	Two carpellate western flax	native	annual herb	Rank 1B.2	-	-	6.2
Hesperolinon californicum	California western flax	native	annual herb	-	-	-	2.8
Hesperolinon didymocarpum	Lake County western flax	native	annual herb	SE, Rank 1B.2	-	-	6.2
Hesperolinon disjunctum	Coast range western flax	native	annual herb	-	-	-	6
Hesperolinon micranthum	Small flower western flax	native	annual herb	-	-	-	2.4
Hesperolinon spergulinum	Slender western flax	native	annual herb	-	-	-	4.7
Heterocodon rariflorum	Heterocodon	native	annual herb	-	-	FACW	-
Heteromeles arbutifolia	Toyon	native	shrub	-	-	-	-
Heterotheca oregona	Oregon golden aster	native	perennial herb	-	-	FACU	-
Hirschfeldia incana	Short-podded mustard	non-native (invasive)	perennial herb	-	Moderate	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Hoita macrostachya	California hemp	native	perennial herb	-	-	OBL	-
Holocarpha virgata ssp. *virgata*	Narrow tarplant	native	annual herb	-	-	-	-
Hordeum brachyantherum ssp. *brachyantherum*	Meadow barley	native	perennial grass	-	-	FACW	-
Hordeum brachyantherum ssp. *californicum*	Meadow barley	native	perennial grass	-	-	FACW	3.1
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native (invasive)	annual grass	-	Moderate	FAC	-
Hordeum murinum ssp. *glaucum*	Foxtail	non-native (invasive)	annual grass	-	Moderate	FACU	-
Hordeum murinum ssp. *leporinum*	Farmer's foxtail	non-native (invasive)	annual grass	-	Moderate	FACU	-
Hypericum concinnum	Gold wire	native	perennial herb	-	-	-	-
Hypericum perforatum ssp. *perforatum*	Klamathweed	non-native	perennial herb	-	Moderate	FACU	-
Hypochaeris glabra	Smooth cats ear	non-native (invasive)	annual herb	-	Limited	-	-
Hypochaeris radicata	Hairy cats ear	non-native (invasive)	perennial herb	-	Moderate	FACU	-
Iris fernaldii	Fernald's iris	native	perennial herb	-	-	-	-
Iris macrosiphon	Ground iris	native	perennial herb	-	-	-	1.1
Juglans hindsii	Northern California black walnut	native	tree	Rank 1B.1	-	FAC	-
Juncus balticus ssp. *ater*	Baltic rush	native	perennial grasslike herb	-	-	FACW	-
Juncus bufonius	Common toad rush	native	annual grasslike herb	-	-	FACW	-
Juncus effusus ssp. *pacificus*	Pacific rush	native	perennial grasslike herb	-	-	FACW	-
Juncus mexicanus	Mexican rush	native	perennial grasslike herb	-	-	FACW	-
Juncus occidentalis	Western rush	native	perennial grasslike herb	-	-	FACW	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Juncus patens	Common rush	native	perennial grasslike herb	-	-	FACW	-
Juncus phaeocephalus var. *phaeocephalus*	Brown headed rush	native	perennial grasslike herb	-	-	FACW	-
Juncus tenuis	Slender rush	native	perennial grasslike herb	-	-	FACW	-
Juncus xiphioides	Iris leaved rush	native	perennial grasslike herb	-	-	OBL	-
Keckiella breviflora var. *glabrisepala*	Hairless gaping keckiella	native	shrub	-	-	-	-
Kickxia elatine	Sharp point fluellin	non-native	perennial herb	-	-	UPL	-
Koeleria macrantha	June grass	native	perennial grass	-	-	-	-
Lactuca saligna	Willow lettuce	non-native	annual herb	-	-	UPL	-
Lactuca serriola	Prickly lettuce	non-native	annual herb	-	-	FACU	-
Lagophylla minor	Little hareleaf	native	annual herb	-	-	-	4.7
Lagophylla ramosissima	Common hareleaf	native	annual herb	-	-	-	-
Lamium amplexicaule	Henbit	non-native	annual herb	-	-	-	-
Lasthenia californica ssp. *californica*	California goldfields	native	annual herb	-	-	FACU	-
Lasthenia glaberrima	Smooth goldfields	native	annual herb	-	-	OBL	-
Lasthenia glabrata ssp. *glabrata*	Yellow rayed goldfields	native	annual herb	-	-	FACW	-
Lasthenia gracilis	Needle goldfields	native	annual herb	-	-	-	-
Lathyrus cicera	Red peavine	non-native	annual herb	-	-	-	-
Lathyrus hirsutus	Caley pea	non-native	annual herb	-	-	FAC	-
Lathyrus tingitanus	Tangier pea	non-native	annual herb	-	-	-	-
Lathyrus vestitus var. *vestitus*	Hillside pea	native	perennial herb	-	-	-	1.8
Layia chrysanthemoides	Smooth tidy tips	native	annual herb	-	-	FACW	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Layia septentrionalis	Colusa layia	native	annual herb	Rank 1B.2	-	-	3.2
Leontodon saxatilis ssp. *longirostris*	Hawkbit	non-native	annual herb	-	-	FACU	-
Lepechinia calycina	Pitcher sage	native	shrub	-	-	-	-
Lepidium latifolium	Perennial pepperweed	non-native (invasive)	perennial herb	-	High	FAC	-
Lepidium nitidum	Shining pepper grass	native	annual herb	-	-	FAC	-
Lepidium strictum	Peppergrass	native	annual herb	-	-	-	-
Leptosiphon bicolor	True babystars	native	annual herb	-	-	UPL	-
Leptosiphon ciliatus	Whiskerbrush	native	annual herb	-	-	-	-
Leptosiphon parviflorus	Variable linanthus	native	annual herb	-	-	-	-
Lessingia ramulosa	Sonoma lessingia	native	annual herb	-	-	-	5.4
Lewisia rediviva var. *rediviva*	Bitter root	native	perennial herb	-	-	-	-
Limnanthes douglasii ssp. *nivea*	Douglas' meadowfoam	native	annual herb	-	-	OBL	-
Linanthus dichotomus ssp. *meridianus*	Evening snow	native	annual herb	-	-	-	-
Lithophragma affine	Common woodland star	native	perennial herb	-	-	-	-
Lithophragma heterophyllum	Woodland star	native	perennial herb	-	-	-	-
Logfia filaginoides	California cottonrose	native	annual herb	-	-	-	-
Logfia gallica	Narrowleaf cottonrose	non-native	annual herb	-	-	-	-
Lomatium californicum	Celery weed	native	perennial herb	-	-	-	-
Lomatium dasycarpum ssp. *tomentosum*	Woolly fruited lomatium	native	perennial herb	-	-	-	-
Lomatium hooveri	Hoover's lomatium	native	perennial herb	Rank 4.3	-	-	5.9
Lomatium marginatum var. *marginatum*	Hartweg's lomatium	native	perennial herb	-	-	-	-
Lomatium marginatum var. *purpureum*	Jepson's lomatium	native	perennial herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Lomatium utriculatum	Hog fennel	native	perennial herb	-	-	-	1.7
Lonicera hispidula	Pink honeysuckle	native	vine, shrub	-	-	FACU	-
Lonicera interrupta	Chaparral honeysuckle	native	vine, shrub	-	-	-	-
Lotus corniculatus	Bird's foot trefoil	non-native	perennial herb	-	-	FAC	-
Lotus tenuis	Narrow-leaf bird's foot trefoil	non-native	perennial herb	-	-	FACU	-
Lupinus albifrons var. *albifrons*	Silver bush lupine	native	shrub	-	-	-	-
Lupinus albifrons var. *collinus*	Silver bush lupine	native	shrub	-	-	-	-
Lupinus bicolor	Miniature lupine	native	annual, perennial herb	-	-	-	-
Lupinus latifolius var. *latifolius*	Broad leaf lupine	native	perennial herb	-	-	FACW	-
Lupinus microcarpus var. *densiflorus*	Dense-flowered chick lupine	native	annual herb	-	-	-	-
Lupinus microcarpus var. *microcarpus*	Chick lupine	native	annual herb	-	-	-	-
Lupinus nanus	Sky lupine	native	annual herb	-	-	-	-
Lupinus succulentus	Arroyo lupine	native	annual herb	-	-	-	-
Luzula comosa var. *comosa*	Hairy wood rush	native	perennial grasslike herb	-	-	FAC	-
Lysimachia arvensis	Scarlet pimpernel	non-native	annual herb	-	-	FAC	-
Lysimachia latifolia	Pacific starflower	native	perennial herb	-	-	FAC	-
Lythrum hyssopifolia	Hyssop loosestrife	non-native (invasive)	annual, perennial herb	-	Limited	OBL	-
Madia elegans	Common madia	native	annual herb	-	-	-	-
Madia exigua	Small tarweed	native	annual herb	-	-	-	1.8
Madia gracilis	Gumweed	native	annual herb	-	-	-	-
Malacothrix floccifera	Woolly malacothrix	native	annual herb	-	-	-	2.1
Malva nicaeensis	Bull mallow	non-native	annual herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Malva parviflora	Cheeseweed	non-native	annual herb	-	-	-	-
Malvella leprosa	Alkali mallow	native	perennial herb	-	-	FACU	-
Marah watsonii	Watson's wild cucumber	native	perennial herb, vine	-	-	-	-
Marrubium vulgare	White horehound	non-native (invasive)	perennial herb	-	Limited	FACU	-
Marsilea vestita ssp. *vestita*	Hairy pepperwort	native	fern	-	-	OBL	-
Matricaria discoidea	Pineapple weed	native	annual herb	-	-	FACU	-
Medicago polymorpha	California burclover	non-native (invasive)	annual herb	-	Limited	FACU	-
Melica californica	California melic	native	perennial grass	-	-	-	-
Melica torreyana	Torrey's melica	native	perennial grass	-	-	-	-
Melilotus albus	White sweetclover	non-native	annual, biennial herb	-	-	-	-
Melilotus indicus	Annual yellow sweetclover	non-native	annual herb	-	-	FACU	-
Mentha pulegium	Pennyroyal	non-native (invasive)	perennial herb	-	Moderate	OBL	-
Micranthes integrifolia	Smooth leaf saxifrage	native	perennial herb	-	-	FACW	-
Micropus californicus var. *californicus*	Slender cottonweed	native	annual herb	-	-	FACU	-
Microseris douglasii ssp. *douglasii*	Douglas' microseris	native	annual herb	-	-	FACU	-
Microseris elegans	Elegant silverpuffs	native	annual herb	-	-	-	-
Mimetanthe pilosa	Snouted monkey flower	native	annual herb	-	-	FACW	-
Minuartia californica	Sandwort	native	annual herb	-	-	FACU	1.7
Minuartia douglasii	Douglas' sandwort	native	annual herb	-	-	-	3
Monardella villosa ssp. *villosa*	Coyote mint	native	perennial herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Monardella viridis	Green monardella	native	perennial herb	Rank 4.3	-	-	1
Montia fontana	Water montia	native	annual herb	-	-	OBL	-
Morus alba	Mulberry	non-native	tree	-	-	FACU	-
Muhlenbergia rigens	Deergrass	native	perennial grass	-	-	FAC	-
Myriophyllum sp.	Water-milfoil	non-native	perennial herb	-	-	OBL	-
Myriopteris covillei	Coville's lip fern	native	fern	-	-	-	-
Narcissus pseudonarcissus	Daffodil	non-native	perennial herb (bulb)	-	-	-	-
Navarretia atractyloides	Holly leaf navarretia	native	annual herb	-	-	-	-
Navarretia cotulifolia	Cotula navarretia	native	annual herb	Rank 4.2	-	OBL	-
Navarretia intertexta	Interwoven navarretia	native	annual herb	-	-	FACW	-
Navarretia jepsonii	Jepson's navarretia	native	annual herb	Rank 4.3	-	FACW	5.6
Navarretia leucocephala ssp. *leucocephala*	White headed navarretia	native	annual herb	-	-	OBL	-
Navarretia mellita	Skunk navarretia	native	annual herb	-	-	FAC	-
Navarretia pubescens	Purple navarretia	native	annual herb	-	-	-	2
Navarretia squarrosa	Skunkweed	native	annual herb	-	-	FACU	-
Nemacladus montanus	Mountain nemacladus	native	annual herb	-	-	-	6
Nemophila heterophylla	Canyon nemophila	native	annual herb	-	-	-	-
Nemophila menziesii var. *atomaria*	Baby blue eyes	native	annual herb	-	-	-	-
Nemophila menziesii var. *menziesii*	Baby blue eyes	native	annual herb	-	-	-	-
Nemophila parviflora var. *parviflora*	Small flowered nemophila	native	annual herb	-	-	-	-
Nicotiana acuminata var. *multiflora*	Many flowered tobacco	non-native	annual herb	-	-	-	-

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Oemleria cerasiformis	Oso berry	native	shrub	-	-	FACU	-
Packera eurycephala var. *eurycephala*	Widehead groundsel	native	perennial herb	-	-	-	-
Packera greenei	Flame ragwort	native	perennial herb	-	-	-	-
Parentucellia viscosa	Yellow glandweed	non-native (invasive)	annual herb	-	Limited	FAC	-
Paspalum dilatatum	Dallis grass	non-native	perennial grass	-	-	FAC	-
Pectocarya pusilla	Little pectocarya	native	annual herb	-	-	-	1.3
Pedicularis densiflora	Indian warrior	native	perennial herb	-	-	-	-
Pellaea andromedifolia	Coffee fern	native	fern	-	-	-	-
Pellaea mucronata var. *mucronata*	Bird's foot fern	native	fern	-	-	-	-
Penstemon heterophyllus var. *heterophyllus*	Foothill penstemon	native	perennial herb	-	-	-	-
Penstemon heterophyllus var. *purdyi*	Purdy's foothill penstemon	native	perennial herb	-	-	-	-
Pentagramma triangularis	Gold back fern	native	fern	-	-	-	-
Perideridia gairdneri ssp. *borealis*	Northern Gairdner's yampah	native	perennial herb	-	-	FAC	-
Perideridia kelloggii	Kellogg's yampah	native	perennial herb	-	-	-	2.1
Persicaria amphibia	Water smartweed	native	perennial herb (aquatic)	-	-	OBL	-
Persicaria maculosa	Spotted ladysthumb	non-native	annual herb	-	-	FACW	-
Persicaria punctata	Dotted smartweed	native	perennial herb	-	-	OBL	-
Petrorhagia dubia	Windmill pink	non-native	annual herb	-	-	-	-
Phacelia distans	Common phacelia	native	annual herb	-	-	OBL	1.1
Phacelia imbricata var. *imbricata*	Imbricate phacelia	native	annual herb	-	-	-	-

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Phalaris aquatica	Harding grass	non-native (invasive)	perennial grass	-	Moderate	FACU	-
Phalaris lemmonii	Lemmon's canarygrass	native	annual grass	-	-	FACW	-
Phalaris minor	Mediterranean canarygrass	non-native	annual grass	-	-	-	-
Phalaris paradoxa	Hood canarygrass	non-native	annual grass	-	-	FAC	-
Phoradendron bolleanum	Bollean mistletoe	native	shrub (parasitic)	-	-	-	-
Phoradendron leucarpum ssp. *tomentosum*	Mistletoe	native	shrub (parasitic)	-	-	-	-
Phyla nodiflora	Common lippia	native	perennial herb	-	-	FACW	-
Physalis lanceifolia	Narrow leaf tomatillo	non-native	annual herb	-	-	UPL	-
Pickeringia montana var. *montana*	Chaparral pea	native	shrub	-	-	-	-
Pinus attenuata	Knobcone pine	native	tree	-	-	-	2.5
Pinus ponderosa var. *pacifica*	Pacific ponderosa pine	native	tree	-	-	FACU	-
Pinus sabiniana	Bull pine	native	tree	-	-	-	1.4
Piperia transversa	Mountain piperia	native	perennial herb	-	-	-	-
Plagiobothrys bracteatus	Bracted allocarya	native	annual herb	-	-	FACW	-
Plagiobothrys fulvus var. *campestris*	Tawny popcorn flower	native	annual herb	-	-	-	-
Plagiobothrys glyptocarpus var. *glyptocarpus*	Sculptured allocarya	native	annual herb	-	-	FACW	-
Plagiobothrys greenei	Greene's allocarya	native	annual herb	-	-	FACW	-
Plagiobothrys nothofulvus	Rusty haired popcorn flower	native	annual herb	-	-	FAC	-
Plagiobothrys stipitatus var. *micranthus*	Common vernal pool allocarya	native	annual herb	-	-	FACW	-
Plantago coronopus	Cut leaf plantain	non-native	annual herb	-	-	FAC	-
Plantago erecta	California plantain	native	annual herb	-	-	-	1

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Plantago lanceolata	Ribwort	non-native (invasive)	perennial herb	-	Limited	FAC	-
Plantago patagonica	Patagonia plantain	native	annual herb	-	-	-	-
Platanus ×hispanica	London plane tree	non-native	tree	-	-	-	-
Platystemon californicus	Cream cups	native	annual herb	-	-	-	1.7
Plectritis ciliosa	Long spurred plectritis	native	annual herb	-	-	FACU	-
Plectritis macrocera	Plectritis	native	annual herb	-	-	FACU	-
Pleuropogon californicus var. *californicus*	Annual semaphoregrass	native	annual grass	-	-	OBL	-
Poa annua	Annual blue grass	non-native	annual grass	-	-	FAC	-
Poa bulbosa ssp. *bulbosa*	Bulbous blue grass	non-native	perennial grass	-	-	FACU	-
Poa pratensis ssp. *pratensis*	Kentucky blue grass	non-native (invasive)	perennial grass	-	Limited	FAC	-
Poa secunda ssp. *secunda*	Sandberg's bluegrass	native	perennial grass	-	-	FACU	-
Pogogyne douglasii	Douglas' pogogyne	native	annual herb	-	-	OBL	-
Pogogyne zizyphoroides	Sacramento mint	native	annual herb	-	-	OBL	-
Polygala californica	Milkwort	native	perennial herb	-	-	-	-
Polygonum aviculare ssp. *aviculare*	Prostrate knotweed	non-native	annual, perennial herb	-	-	FACW	-
Polypodium californicum	California polypody	native	fern	-	-	-	-
Polypodium calirhiza	Licorice fern	native	fern	-	-	-	-
Polypogon interruptus	Ditch beard grass	non-native	perennial grass	-	-	FACW	-
Polypogon maritimus	Mediterranean beard grass	non-native	annual grass	-	-	OBL	-
Polypogon monspeliensis	Annual beard grass	non-native (invasive)	annual grass	-	Limited	FACW	-
Populus fremontii ssp. *fremontii*	Cottonwood	native	tree	-	-	FAC	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Portulaca oleracea	Common purslane	non-native	annual herb	-	-	FAC	-
Primula hendersonii	Mosquito bill	native	perennial herb	-	-	-	-
Prunus cerasifera	Cherry plum	non-native (invasive)	tree	-	Limited	-	-
Pseudognaphalium californicum	Ladies' tobacco	native	annual, perennial herb	-	-	-	-
Pseudognaphalium luteoalbum	Jersey cudweed	non-native	annual herb	-	-	FAC	-
Pseudotsuga menziesii var. *menziesii*	Douglas fir	native	tree	-	-	FACU	-
Psilocarphus brevissimus var. *brevissimus*	Woolly heads	native	annual herb	-	-	FACW	-
Psilocarphus chilensis	Round woolly marbles	native	annual herb	-	-	FACW	-
Pteridium aquilinum var. *pubescens*	Western bracken fern	native	fern	-	-	FACU	-
Pterostegia drymarioides	Fairy mist	native	annual herb	-	-	-	-
Quercus ×morehus	Oracle oak	native	tree	-	-	-	-
Quercus berberidifolia	Inland scrub oak	native	tree	-	-	-	-
Quercus chrysolepis	Gold cup live oak	native	tree	-	-	-	-
Quercus douglasii	Blue oak	native	tree	-	-	-	-
Quercus durata var. *durata*	Leather oak	native	shrub	-	-	-	5.8
Quercus kelloggii	California black oak	native	tree	-	-	-	-
Quercus lobata	Valley oak	native	tree	-	-	FACU	-
Quercus wislizeni var. *wislizeni*	Interior live oak	native	tree, shrub	-	-	-	-
Rafinesquia californica	California chicory	native	annual herb	-	-	-	-
Ranunculus aquatilis var. *aquatilis*	Whitewater crowfoot	native	perennial herb (aquatic)	-	-	OBL	-
Ranunculus californicus var. *californicus*	Common buttercup	native	perennial herb	-	-	FACU	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Ranunculus hebecarpus	Pubescent fruited buttercup	native	annual herb	-	-	-	-
Ranunculus muricatus	Buttercup	non-native	annual, perennial herb	-	-	FACW	-
Ranunculus occidentalis var. *occidentalis*	Western buttercup	native	perennial herb	-	-	FAC	-
Raphanus raphanistrum	Jointed charlock	non-native	annual, perennial herb	-	-	-	-
Raphanus sativus	Wild radish	non-native (invasive)	annual, biennial herb	-	Limited	-	-
Rhamnus ilicifolia	Evergreen buckthorn	native	shrub	-	-	-	-
Rhododendron occidentale	Western azalea	native	tree, shrub	-	-	FAC	-
Rhus aromatica	Fragrant sumac	native	shrub	-	-	FACU	-
Ribes malvaceum var. *malvaceum*	Chaparral currant	native	shrub	-	-	-	-
Rigiopappus leptocladus	Wire weed	native	annual herb	-	-	-	1.9
Robinia pseudoacacia	Black locust	non-native (invasive)	tree	-	Limited	FACU	-
Rosa californica	California wild rose	native	shrub	-	-	FAC	-
Rubus armeniacus	Himalayan blackberry	non-native (invasive)	shrub	-	High	FAC	-
Rumex crispus	Curly dock	non-native (invasive)	perennial herb	-	Limited	FAC	-
Rumex pulcher	Fiddleleaf dock	non-native	perennial herb	-	-	FAC	-
Salix breweri	Serpentine willow	native	shrub	-	-	FAC	6
Salix exigua var. *hindsiana*	Sandbar willow	native	tree, shrub	-	-	FACW	-
Salix gooddingii	Gooding's willow	native	tree	-	-	FACW	-
Salix laevigata	Polished willow	native	tree	-	-	FACW	-
Salix lasiolepis	Arroyo willow	native	tree, shrub	-	-	FACW	-
Salsola sp.	Russian thistle	non-native	annual herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Salvia columbariae	Chia sage	native	annual herb	-	-	-	-
Salvia sonomensis	Sonoma sage	native	perennial herb	-	-	-	1.6
Sambucus nigra ssp. *caerulea*	Blue elderberry	native	shrub	-	-	FAC	-
Sanicula bipinnata	Poison sanicle	native	perennial herb	-	-	-	-
Sanicula bipinnatifida	Purple sanicle	native	perennial herb	-	-	-	1.8
Sanicula crassicaulis	Pacific sanicle	native	perennial herb	-	-	-	-
Sanicula tuberosa	Turkey pea	native	perennial herb	-	-	-	1.3
Schoenoplectus acutus var. *occidentalis*	Tule	native	perennial grasslike herb	-	-	OBL	-
Schoenoplectus tabernaemontani	Softstem bulrush	native	perennial grasslike herb	-	-	OBL	-
Scleranthus annuus ssp. *annuus*	German knotgrass	non-native	annual herb	-	-	FACU	-
Scrophularia californica	California bee plant	native	perennial herb	-	-	FAC	-
Scutellaria antirrhinoides	Snapdragon skullcap	native	perennial herb	-	-	-	2.3
Scutellaria californica	California skullcap	native	perennial herb	-	-	-	-
Scutellaria siphocampyloides	Gray leaved skullcap	native	perennial herb	-	-	FACU	-
Scutellaria tuberosa	Dannie's skullcap	native	perennial herb	-	-	-	-
Senecio aronicoides	Butterweed	native	perennial herb	-	-	-	-
Senecio clevelandii var. *clevelandii*	Cleveland's ragwort	native	perennial herb	Rank 4.3	-	-	-
Senecio vulgaris	Common groundsel	non-native	annual herb	-	-	FACU	-
Sherardia arvensis	Field madder	non-native	annual herb	-	-	-	-
Sidalcea diploscypha	Fringed checker mallow	native	annual herb	-	-	-	2.6
Sidalcea hartwegii	Hartweg's checkerbloom	native	annual herb	-	-	-	1.6
Sidalcea hirsuta	Hairy checkerbloom	native	annual herb	-	-	OBL	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Sidalcea keckii	Keck's checkerbloom	native	annual herb	FE, Rank 1B.1	-	-	3
Silene gallica	Common catchfly	non-native	annual herb	-	-	-	-
Silene laciniata ssp. *californica*	California indian pink	native	perennial herb	-	-	-	-
Silybum marianum	Milk thistle	non-native (invasive)	annual, perennial herb	-	Limited	-	-
Sisymbrium irio	London rocket	non-native (invasive)	annual herb	-	Moderate	-	-
Sisymbrium officinale	Hedge mustard	non-native	annual herb	-	-	-	-
Sisyrinchium bellum	Blue eyed grass	native	perennial herb	-	-	FACW	-
Solanum parishii	Parish's purple nightshade	native	shrub	-	-	-	-
Solanum xanti	Nightshade	native	perennial herb, shrub	-	-	-	-
Solidago elongata	West coast canada goldenrod	native	perennial herb	-	-	FACU	-
Soliva sessilis	South american soliva	non-native	annual herb	-	-	FACU	-
Sonchus asper ssp. *asper*	Prickly sow thistle	non-native	annual herb	-	-	FAC	-
Sonchus oleraceus	Common sow thistle	non-native	annual herb	-	-	UPL	-
Sorghum halepense	Johnsongrass	non-native	perennial grass	-	-	FACU	-
Spartium junceum	Spanish broom	non-native (invasive)	shrub	-	High	-	-
Spergularia rubra	Purple sand spurry	non-native	annual, perennial herb	-	-	FAC	-
Spiranthes porrifolia	Western ladies tresses	native	perennial herb	-	-	FACW	-
Stachys albens	Cobwebby hedge nettle	native	perennial herb	-	-	OBL	-
Stachys rigida var. *quercetorum*	Rough hedgenettle	native	perennial herb	-	-	FACW	-
Stebbinsoseris heterocarpa	Grassland stebbinsoseris	native	annual herb	-	-	-	-
Stellaria media	Chickweed	non-native	annual herb	-	-	FACU	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Stephanomeria virgata ssp. *pleurocarpa*	Tall stephanomeria	native	annual herb	-	-	-	-
Stipa cernua	Nodding needle grass	native	perennial grass	-	-	-	-
Stipa lepida	Foothill needle grass	native	perennial grass	-	-	-	-
Stipa miliacea var. *miliacea*	Smilo grass	non-native (invasive)	perennial grass	-	Limited	-	-
Stipa pulchra	Purple needle grass	native	perennial grass	-	-	-	-
Streptanthus breweri	Brewer's jewelflower	native	annual herb	-	-	-	5.7
Streptanthus glandulosus ssp. *glandulosus*	Jewelflower	native	annual herb	-	-	-	-
Streptanthus hesperidis	Green jewel-flower	native	annual herb	Rank 1B.2	-	-	-
Streptanthus morrisonii	Morrison's jewelflower	native	perennial herb	Rank 1B.2	-	-	6.1
Symphoricarpos albus var. *laevigatus*	Common snowberry	native	shrub	-	-	FACU	-
Symphoricarpos mollis	Creeping snowberry	native	shrub	-	-	FACU	-
Tamarix parviflora	Tamarisk	non-native (invasive)	tree, shrub	-	High	FAC	-
Taraxacum officinale	Red seeded dandelion	non-native	perennial herb	-	-	FACU	-
Taraxia ovata	Sun cup	native	perennial herb	-	-	-	-
Tetrapteron graciliflorum	Hill sun cup	native	annual herb	-	-	-	-
Thalictrum fendleri var. *polycarpum*	Torrey's meadow rue	native	perennial herb	-	-	FAC	-
Thermopsis californica var. *californica*	California goldenbanner	native	perennial herb (rhizomatous)	-	-	-	-
Thysanocarpus curvipes ssp. *curvipes*	Fringe pod	native	annual herb	-	-	-	-
Torilis arvensis	Field hedge parsley	non-native (invasive)	annual herb	-	Moderate	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Torilis nodosa	Wild parsley	non-native	annual herb	-	-	-	-
Toxicodendron diversilobum	Poison oak	native	vine, shrub	-	-	FACU	-
Toxicoscordion fontanum	Marsh zigadenus	native	perennial herb	Rank 4.2	-	OBL	-
Toxicoscordion fremontii	Fremont's star lily	native	perennial herb	-	-	-	-
Toxicoscordion micranthum	Small flowered star lily	native	perennial herb	-	-	OBL	-
Tragopogon porrifolius	Salsify	non-native	perennial herb	-	-	-	-
Tribulus terrestris	Puncture vine	non-native (invasive)	annual herb	-	Limited	-	-
Trichostema lanceolatum	Vinegarweed	native	annual herb	-	-	FACU	-
Trichostema laxum	Turpentine weed	native	annual herb	-	-	-	4
Trifolium albopurpureum	Indian clover	native	annual herb	-	-	FACU	-
Trifolium bifidum var. *bifidum*	Pinole clover	native	annual herb	-	-	-	-
Trifolium campestre	Hop clover	non-native	annual herb	-	-	-	-
Trifolium ciliolatum	Tree clover	native	annual herb	-	-	-	-
Trifolium depauperatum var. *depauperatum*	Dwarf sack clover	native	annual herb	-	-	FAC	-
Trifolium depauperatum var. *truncatum*	Dwarf sack clover	native	annual herb	-	-	FAC	-
Trifolium dichotomum	Branched indian clover	native	annual herb	-	-	-	-
Trifolium dubium	Shamrock	non-native	annual herb	-	-	UPL	-
Trifolium fucatum	Bull clover	native	annual herb	-	-	FACU	1.3
Trifolium glomeratum	Clustered clover	non-native	annual herb	-	-	-	-
Trifolium gracilentum	Pin point clover	native	annual herb	-	-	-	1
Trifolium hirtum	Rose clover	non-native (invasive)	annual herb	-	Limited	-	-
Trifolium incarnatum	Crimson clover	non-native	annual herb	-	-	-	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Trifolium microcephalum	Small head clover	native	annual herb	-	-	FAC	1.4
Trifolium microdon	Valparaiso clover	native	annual herb	-	-	-	-
Trifolium pratense	Red clover	non-native	perennial herb	-	-	FACU	-
Trifolium subterraneum	Subterranean clover	non-native	annual herb	-	-	-	-
Trifolium tomentosum	Woolly clover	non-native	annual herb	-	-	-	-
Trifolium variegatum var. *geminiflorum*	Small-flowered variegated clover	native	annual herb	-	-	FAC	-
Trifolium variegatum var. *major*	Large variegated clover	native	annual herb	-	-	FAC	-
Trifolium variegatum var. *variegatum*	Variegated clover	native	annual herb	-	-	FAC	-
Trifolium willdenovii	Tomcat clover	native	annual herb	-	-	FACW	1.3
Triglochin scilloides	Flowering-quillwort	native	annual herb (aquatic)	-	-	OBL	-
Triphysaria eriantha ssp. *eriantha*	Butter 'n' eggs	native	annual herb	-	-	-	-
Triphysaria pusilla	Little owl's clover	native	annual herb	-	-	-	-
Triphysaria versicolor ssp. *faucibarbata*	Yellow owl's clover	native	annual herb	-	-	-	-
Triteleia hyacinthina	Wild hyacinth	native	perennial herb	-	-	FAC	-
Triteleia laxa	Ithuriel's spear	native	perennial herb	-	-	-	-
Triteleia lugens	Dark-mouthed triteleia	native	perennial herb	Rank 4.3	-	-	-
Triteleia peduncularis	Marsh triteleia	native	perennial herb	-	-	FACW	3.8
Typha angustifolia	Narrow leaf cattail	non-native	perennial herb (aquatic)	-	-	OBL	-
Typha latifolia	Broadleaf cattail	native	perennial herb (aquatic)	-	-	OBL	-
Ulmus pumila	Siberian elm	non-native	tree	-	-	UPL	-
Umbellularia californica	California bay	native	tree	-	-	FAC	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Uropappus lindleyi	Silver puffs	native	annual herb	-	-	-	-
Urtica dioica ssp. *holosericea*	Stinging nettle	native	perennial herb	-	-	FAC	-
Velezia rigida	Velezia	non-native	annual herb	-	-	-	-
Verbascum blattaria	Moth mullein	non-native	perennial herb	-	-	UPL	-
Verbascum thapsus	Woolly mullein	non-native (invasive)	perennial herb	-	Limited	FACU	-
Verbena lasiostachys var. *scabrida*	Robust vervain	native	perennial herb	-	-	FAC	-
Veronica anagallis-aquatica	Water speedwell	non-native	perennial herb	-	-	OBL	-
Veronica peregrina ssp. *xalapensis*	Speedwell	native	annual herb	-	-	FAC	-
Vicia benghalensis	Purple vetch	non-native	annual herb, vine	-	-	-	-
Vicia sativa ssp. *nigra*	Smaller common vetch	non-native	annual herb, vine	-	-	FACU	-
Vicia sativa ssp. *sativa*	Common vetch	non-native	annual herb, vine	-	-	FACU	-
Vicia villosa ssp. *varia*	Smooth vetch	non-native	annual herb, vine	-	-	-	-
Vicia villosa ssp. *villosa*	Hairy vetch	non-native	annual herb, vine	-	-	-	-
Viola douglasii	Douglas' violet	native	perennial herb	-	-	-	2.8
Viola purpurea ssp. *quercetorum*	Goosefoot yellow violet	native	perennial herb	-	-	-	-
Vitis californica	California wild grape	native	vine, shrub	-	-	FACU	-
Vitis vinifera	Cultivated grape	non-native	vine, shrub	-	-	-	-
Whipplea modesta	Modesty	native	vine, shrub	-	-	-	-
Woodwardia fimbriata	Western chain fern	native	fern	-	-	OBL	-
Wyethia angustifolia	Narrow leaved mule ears	native	perennial herb	-	-	FACU	-

Scientific Name	Common Name	Origin	Form	Conservation Status[1]	Cal-IPC Status[2]	Wetland Status[3]	Serpentine Affinity[4]
Wyethia glabra	Smooth mule ears	native	perennial herb	-	-	-	-
Wyethia helenioides	Gray mule ears	native	perennial herb	-	-	-	-
Xanthium strumarium	Cocklebur	native	annual herb	-	-	FAC	-
Zannichellia palustris	Horned pondweed	native	perennial herb	-	-	OBL	-
Zeltnera muehlenbergii	Muehlenberg's centaury	native	annual herb	-	-	FAC	-
Zeltnera trichantha	Alkali centaury	native	annual herb	-	-	FAC	-

[1]Key to Conservation Status (CNPS 2019a):

FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
ST	State Threatened
Rank 1A	CNPS Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B.1	CNPS Rank 1B.1: Rare, threatened, or endangered in California and elsewhere (seriously threatened in California)
Rank 1B.2	CNPS Rank 1B.2: Rare, threatened, or endangered in California and elsewhere (moderately threatened in California)
Rank 1B.3	CNPS Rank 1B.3: Rare, threatened, or endangered in California and elsewhere (not very threatened in California)
Rank 2A	CNPS Rank 2A: Presumed extirpated in California, but more common elsewhere
Rank 2B.1	CNPS Rank 2B.1: Rare, threatened, or endangered in California, but more common elsewhere (seriously threatened in California)
Rank 2B.2	CNPS Rank 2B.2: Rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)
Rank 2B.3	CNPS Rank 2B.3: Rare, threatened, or endangered in California, but more common elsewhere (not very threatened in California)
Rank 3.1	CNPS Rank 3.1: Plants about which more information is needed - A review list (seriously threatened in California)
Rank 3.2	CNPS Rank 3.2: Plants about which more information is needed - A review list (moderately threatened in California)
Rank 3.3	CNPS Rank 3.3: Plants about which more information is needed - A review list (not very threatened in California)
Rank 4.1	CNPS Rank 4.1: Plants of limited distribution - A watch list (seriously threatened in California)
Rank 4.2	CNPS Rank 4.2: Plants of limited distribution - A watch list (moderately threatened in California)
Rank 4.3	CNPS Rank 4.3: Plants of limited distribution - A watch list (not very threatened in California)

[2]Key to Cal-IPC Status (Cal-IPC 2019):

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

[3]Key to Wetland Status (Lichvar et al. 2016):

OBL Obligate plant; almost always occurs in wetlands.
FACW Facultative wetland plant; usually occurs in wetlands, but may occur in non-wetlands.
FAC Facultative plant; occurs in wetlands and nonwetlands.
FACU Facultative upland plant; usually occurs in non-wetlands, but may occur in wetlands.
UPL Upland plant; almost never occur in wetlands.

[4]Key to Serpentine Affinity (Safford et al. 2005):

6 95–100% of records occur on ultramafics
5 85–94% of records occur on ultramafics
4 75–84% of records occur on ultramafics
3 65–74% of records occur on ultramafics
2 55–64% of records occur on ultramafics
1 45–54% of records occur on ultramafics
0.75 35–44% of records occur on ultramafics
0.5 25–34% of records occur on ultramafics
0.25 15–24% of records occur on ultramafics
0.1 0–14% of records occur on ultramafics
0 0% of records occur on ultramafics