

## ***APPENDIX BRA2***

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*FUTURE PHASES BIOLOGICAL RESOURCES ASSESSMENT*

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# Biological Resources Assessment

MAHA RESORT AND GUENOC VALLEY DEVELOPMENT,  
PHASE 2 AND OPEN SPACE  
LAKE COUNTY, CALIFORNIA

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**Date:** February 2020

WRA Project No. 27162-2







## EXECUTIVE SUMMARY

This report provides an assessment of biological communities and special-status plant and wildlife species within the approximately 11,550-acre Phase 2 and Open Space Study Area for the proposed Maha Resort and Guenoc Valley Development located on the approximately 22,695-acre Guenoc Ranch. This report is intended to supplement the Biological Resources Assessment report prepared for Phase 1 of the project (WRA 2019).

On multiple dates in 2018 and 2019, WRA biologists conducted surveys across Guenoc Ranch to document baseline biological conditions to support an assessment of biological resources under the California Environmental Quality Act. The specific focus of WRA's efforts included mapping biological communities and landcover types, conducting reconnaissance-level surveys for special-status plants, and assessing the potential for special-status wildlife species to occur. Efforts in 2018 primarily focused on the Phase 1 portions of the property, but had some overlap with the Phase 2 and Open Space portions of the property. Efforts in 2019 had a specific focus on the Phase 2 and Open Space areas. This report describes the methods and results of those surveys and assessments and also provides recommendations for avoiding or minimizing impacts to sensitive resources, as well as mitigation measures for unavoidable impacts.

Guenoc Ranch is located in unincorporated Lake and Napa counties, California, with the Phase 2/Open Space Study Area occurring entirely within Lake County. 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. Within the Phase 2 and Open Space Areas, WRA documented 25 biological communities and other land use designations, including 13 sensitive biological community types covering 4,932 acres. This includes approximately 330 acres of wetland habitat, 626 acres of ponds and reservoirs, and 148 acres and 736,000 linear feet of streams (including 941 linear feet of ditches that may be considered Waters of the United States and/or Waters of the State).

WRA documented 660 plant taxa<sup>1</sup>, and 130 wildlife species<sup>2</sup>. Twenty-eight special-status plant species were observed, and an additional 80 special-status plant species were determined to have moderate to high potential to occur, primarily associated with serpentine and volcanic habitats found throughout the Phase 2 and Open Space areas. Fourteen special-status wildlife species were observed within the larger Guenoc Ranch and have potential to occur in the Phase 2 and Open Space areas. An additional 21 special-status wildlife species were determined to have potential to occur in one or more habitats within the Phase 2/Open Space Study Area.

WRA documented several federal- and state-protected species including Keck's checkerbloom (*Sidalcea keckii*; Federal Endangered), Lake County western flax (*Hesperolinon didymocarpum*; State Endangered), bald eagle (*Haliaeetus leucocephalus*; Federal Bald and Golden Eagle Protection Act, State Endangered), golden eagle (*Aquila chrysaetos*; Federal Bald and Golden Eagle Protection Act, California Fully Protected Species), and foothill yellow-legged frog (*Rana boylei*; State Candidate), white tailed kite (*Elanus leucurus*; California Fully Protected Species),

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<sup>1</sup> Includes plant species observed throughout the property, in both the Phase 1 and Phase 2/Open Space areas.

<sup>2</sup> Includes wildlife species observed throughout the property, in both the Phase 1 and Phase 2/Open Space areas.

and peregrine falcon (*Falco peregrinus*; California Fully Protected Species). Bald eagle, golden eagle, and peregrine falcon nests were observed in association with Detert Reservoir, McCreary Lake, Lake Burgundy, and other areas. White tailed kite was observed foraging near Lower Bohn Lake and other portions of the Phase 2/Open Space Study Area, but was not documented nesting.

The size and diversity of habitats found within the Phase 2/Open Space Study Area makes it an important resource for plant and wildlife species. The large acreage of serpentine and volcanic soils and the high number of aquatic resources found within the Phase 2/Open Space Study Area provides suitable habitat for numerous special-status plant and wildlife species. The Project proposes to minimize impacts to sensitive resources to the fullest extent feasible and practicable through a combination of (1) extensive pre-planning surveys to document and avoid sensitive resources during the design phase, (2) pre-construction surveys to account for project phasing and potential changes in the distribution of sensitive resources following the original pre-planning surveys, (3) robust best management practices to avoid and/or minimize potential impacts when working around sensitive resources or within suitable habitat for special-status species. Where it is infeasible to avoid impacts, the project proposes to offset impacts through the conservation of a large open space corridor and other selected portions of the Ranch that contain high-quality examples of the sensitive resources in question.

## TABLE OF CONTENTS

|                                                                                                  |    |
|--------------------------------------------------------------------------------------------------|----|
| 1.0 INTRODUCTION.....                                                                            | 1  |
| 2.0 REGULATORY BACKGROUND .....                                                                  | 1  |
| 2.1 Biological Communities .....                                                                 | 1  |
| 2.1.1 Non-Sensitive Biological Communities .....                                                 | 1  |
| 2.1.2 Sensitive Biological Communities.....                                                      | 4  |
| 2.2 Special-Status Species.....                                                                  | 6  |
| 3.0 ENVIRONMENTAL SETTING .....                                                                  | 7  |
| 3.1 Climate and Hydrology .....                                                                  | 8  |
| 3.2 Geology and Soils .....                                                                      | 8  |
| 3.3 Vegetation and Land Use .....                                                                | 9  |
| 4.0 METHODS .....                                                                                | 9  |
| 4.1 Biological Communities .....                                                                 | 13 |
| 4.2 Special-Status Species.....                                                                  | 14 |
| 5.0 RESULTS .....                                                                                | 17 |
| 5.1 Biological Communities .....                                                                 | 17 |
| 5.1.1 Non-Sensitive Biological Communities .....                                                 | 21 |
| 5.1.2 Sensitive Biological Communities.....                                                      | 24 |
| 5.2 Special-Status Plant Species.....                                                            | 29 |
| 5.2.1 Special-Status Plant Species Observed within the Phase 2/Open Space<br>Study Area .....    | 33 |
| 5.2.2 Special-Status Plant Species with Potential to Occur .....                                 | 42 |
| 5.3 Special-Status Wildlife Species .....                                                        | 45 |
| 5.3.1 Special-Status Wildlife Species Observed within the Phase 2/Open Space<br>Study Area ..... | 49 |
| 5.3.2 Special-Status Wildlife Species with Potential to Occur.....                               | 54 |
| 6.0 SUMMARY AND RECOMMENDATIONS.....                                                             | 55 |
| 6.1 General Measures .....                                                                       | 55 |
| 6.2 Biological Communities .....                                                                 | 57 |
| 6.3 Special-Status Plant Species.....                                                            | 59 |
| 6.4 Special-Status Wildlife Species .....                                                        | 60 |
| 6.4.1 Special-Status Mammals.....                                                                | 60 |
| 6.4.2 Special-Status Birds.....                                                                  | 62 |
| 6.4.3 Special-Status Reptiles and Amphibians .....                                               | 64 |
| 6.3.4 Wildlife Corridors.....                                                                    | 65 |
| 7.0 REFERENCES .....                                                                             | 67 |

## LIST OF TABLES

|                                                                                                                       |    |
|-----------------------------------------------------------------------------------------------------------------------|----|
| Table 1. Description of CNPS California Rare Plant Ranks and Threat Codes.....                                        | 7  |
| Table 2. Soils Mapped within the Phase 2 and Open Space Study Area.....                                               | 11 |
| Table 3. Summary of Survey Dates and Level of Effort.....                                                             | 13 |
| Table 4. Biological Communities Mapped within the Phase 2/Open Space Study Area.....                                  | 18 |
| Table 5. Special-Status Plant Species Observed within the Phase 2/Open Space Study Area                               | 31 |
| Table 6. Special-Status Plant Species with Moderate Potential to Occur within the Phase 2/Open Space Study Area ..... | 43 |
| Table 7. Special-Status Wildlife Species Observed within or adjacent to the Phase 2/Open Space Study Area .....       | 49 |
| Table 8. Special-Status Wildlife Species with Potential to Occur within the Phase 2/Open Space Study Area .....       | 54 |

## LIST OF FIGURES

|                                                                                                    |    |
|----------------------------------------------------------------------------------------------------|----|
| Figure 1. Phase 2/Open Space Study Area Location Map .....                                         | 2  |
| Figure 2. Phase 2/Open Space Study Area Overview .....                                             | 3  |
| Figure 3. Soils Mapped within Guenoc Ranch.....                                                    | 10 |
| Figure 4. Special-Status Plant Records from within 5 Miles of the Guenoc Property .....            | 30 |
| Figure 5. Special-Status Wildlife Species Records from within 5 Miles of the Guenoc Property ..... | 47 |
| Figure 6. Special-Status Wildlife Species Observed within the Phase 2/Open Space Study Area .....  | 48 |

## LIST OF APPENDICES

|            |                                                                                                 |
|------------|-------------------------------------------------------------------------------------------------|
| Appendix A | Biological Communities within the Phase 2/Open Space Study Area                                 |
| Appendix B | Aquatic Resources and Riparian Habitat within the Phase 2/Open Space Study Area                 |
| Appendix C | List of Plant Species Observed within the Phase 2/Open Space Study Area                         |
| Appendix D | Potential for Special-Status Plant Species to Occur within the Phase 2/Open Space Study Area    |
| Appendix E | Special-Status Plant Species Observed within the Phase 2/Open Space Study Area                  |
| Appendix F | List of Wildlife Species Observed within the Phase 2/Open Space Study Area                      |
| Appendix G | Potential for Special-Status Wildlife Species to occur within the Phase 2/Open Space Study Area |
| Appendix H | Site Photographs                                                                                |



## LIST OF ACRONYMS AND ABBREVIATIONS

|        |                                                 |
|--------|-------------------------------------------------|
| BCC    | USFWS Bird of Conservation Concern              |
| CCR    | California Code of Regulations                  |
| CDFG   | California Department of Fish and Game          |
| CDFW   | California Department of Fish and Wildlife      |
| CEQA   | California Environmental Quality Act            |
| CESA   | California Endangered Species Act               |
| CFGF   | California Fish and Game Code                   |
| CFP    | California Fully Protected Species              |
| CFR    | Code of Federal Regulations                     |
| CNDDDB | California Natural Diversity Database           |
| CNPS   | California Native Plant Society                 |
| Corps  | U.S. Army Corps of Engineers                    |
| CRLF   | California Red-Legged Frog                      |
| CWA    | Clean Water Act                                 |
| DBH    | Diameter at Breast Height                       |
| EFH    | Essential Fish Habitat                          |
| ESA    | Federal Endangered Species Act                  |
| FC     | Federal Candidate                               |
| FE     | Federal-Endangered                              |
| FT     | Federal-Threatened                              |
| FYLF   | Foothill Yellow-Legged Frog                     |
| HMMP   | Habitat Mitigation and Monitoring Plan          |
| ITP    | Individual Take Permit                          |
| MBTA   | Migratory Bird Treaty Act                       |
| NMFS   | National Marine Fisheries Service               |
| NOAA   | National Oceanic and Atmospheric Administration |
| NRCS   | Natural Resources Conservation Service          |
| OWHM   | Ordinary High Water Mark                        |
| Rank   | California Rare Plant Rank                      |
| RWQCB  | Regional Water Quality Control Board            |
| SC     | State-Candidate                                 |
| SE     | State-Endangered                                |
| SSC    | CDFW Species of Special Concern                 |
| SSI    | CDFW Special-Status Invertebrate                |
| ST     | State-Threatened                                |
| USDA   | U.S. Department of Agriculture                  |
| USDOI  | U.S. Department of the Interior                 |
| USFWS  | U.S. Fish and Wildlife Service                  |
| USGS   | U.S. Geological Survey                          |
| WBWG   | Western Bat Working Group                       |
| WPT    | Western pond turtle                             |
| WRA    | WRA, Inc.                                       |

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## **1.0 INTRODUCTION**

On multiple dates in 2018 and 2019, WRA, Inc. (WRA) performed a reconnaissance-level assessment of biological resources within the approximately 11,550-acre Study Area for the Phase 2 and the Open Space portions of the proposed Maha Resort and Guenoc Valley Development located in Lake County, California (Figure 1, 2). The project is sited within the approximately 22,695-acre Guenoc Ranch, located on Butts Canyon Road, approximately 6 miles southeast of Middletown. Guenoc Ranch spans portions of both unincorporated Lake and Napa counties; however, the Study Area for Phase 2 and the Open Space occurs entirely within Lake County. The purpose of the assessment was to develop a baseline biological inventory to help guide planning efforts and to gather information on sensitive biological communities, special-status plant and wildlife species, and other sensitive biological resources to support an evaluation of the proposed project under the California Environmental Quality Act (CEQA).

This report is intended to supplement the Biological Resources Assessment report prepared for Phase 1 of the project (WRA 2020). This report describes the methods and results of the surveys and assessments conducted by WRA biologists to determine (1) the presence of sensitive biological communities, (2) the potential for biological communities on the site to support special-status plant and wildlife species, (3) the presence of any special-status plant or wildlife species encountered during reconnaissance-level and focused surveys, and (4) the presence of any other sensitive natural resources protected by local, state, or federal laws and regulations.

A biological resources assessment provides general information on the presence, or potential presence, of sensitive habitats and species. The biological resources assessment is not an official protocol-level survey for listed species or an official wetland delineation that may be required for project approval by local, state, or federal agencies. An overview of the delineation methods and results is provided here for completeness. The assessments presented here are based on information available at the time of the study and on conditions observed on the dates the site was visited.

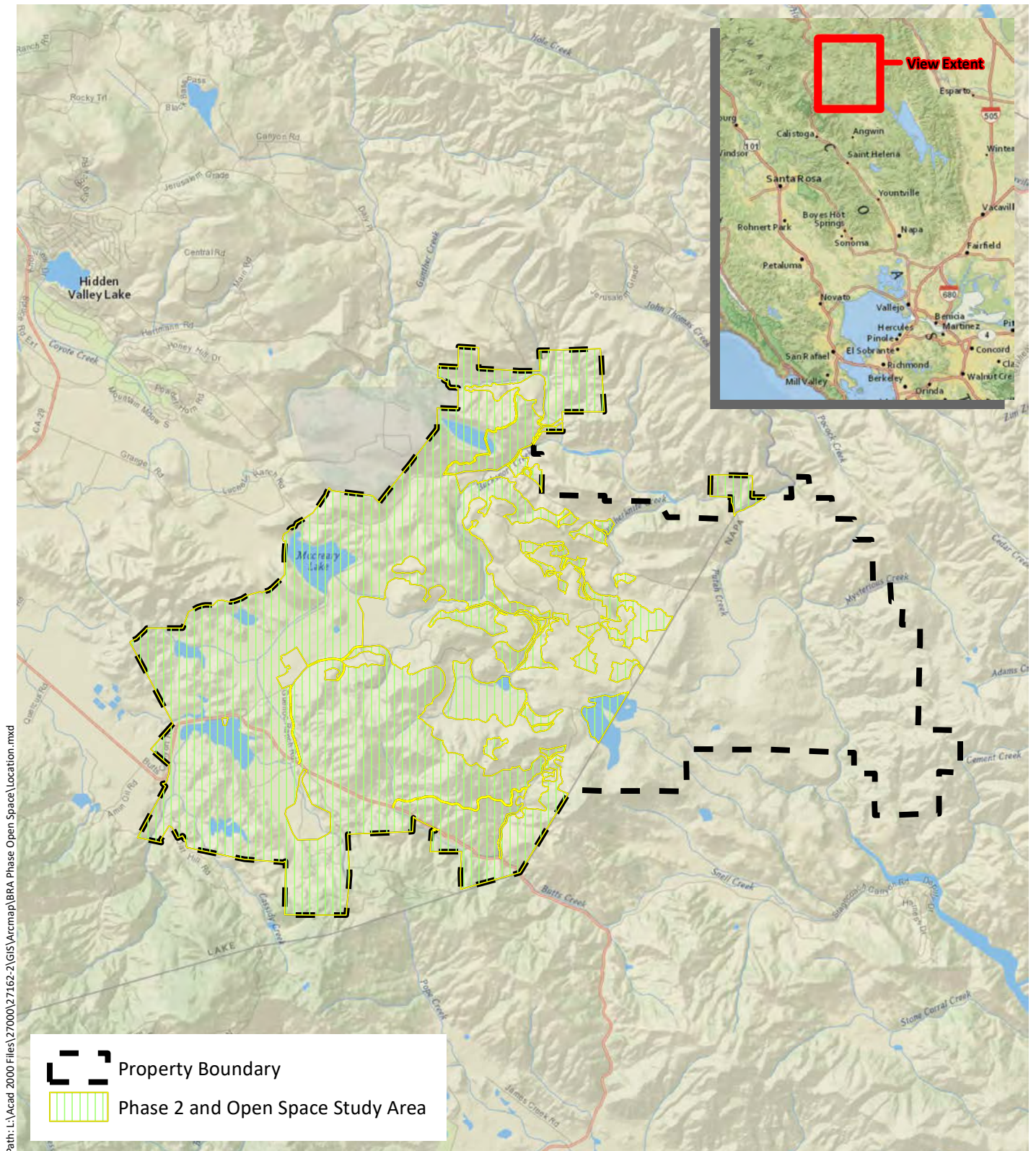
## **2.0 REGULATORY BACKGROUND**

The following sections describe the regulatory context of the biological resources assessment, including laws and regulations that were applied to the field investigations.

### **2.1 Biological Communities**

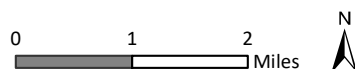
#### *2.1.1 Non-Sensitive Biological Communities*

Non-sensitive biological communities include plant communities with a California Department of Fish and Wildlife (CDFW) rarity ranking of S4 or S5, as well as other non-sensitive land use designations such as agriculture, developed areas, etc. These biological communities and land uses are not protected by federal, state, or local laws and are not considered sensitive under CEQA.

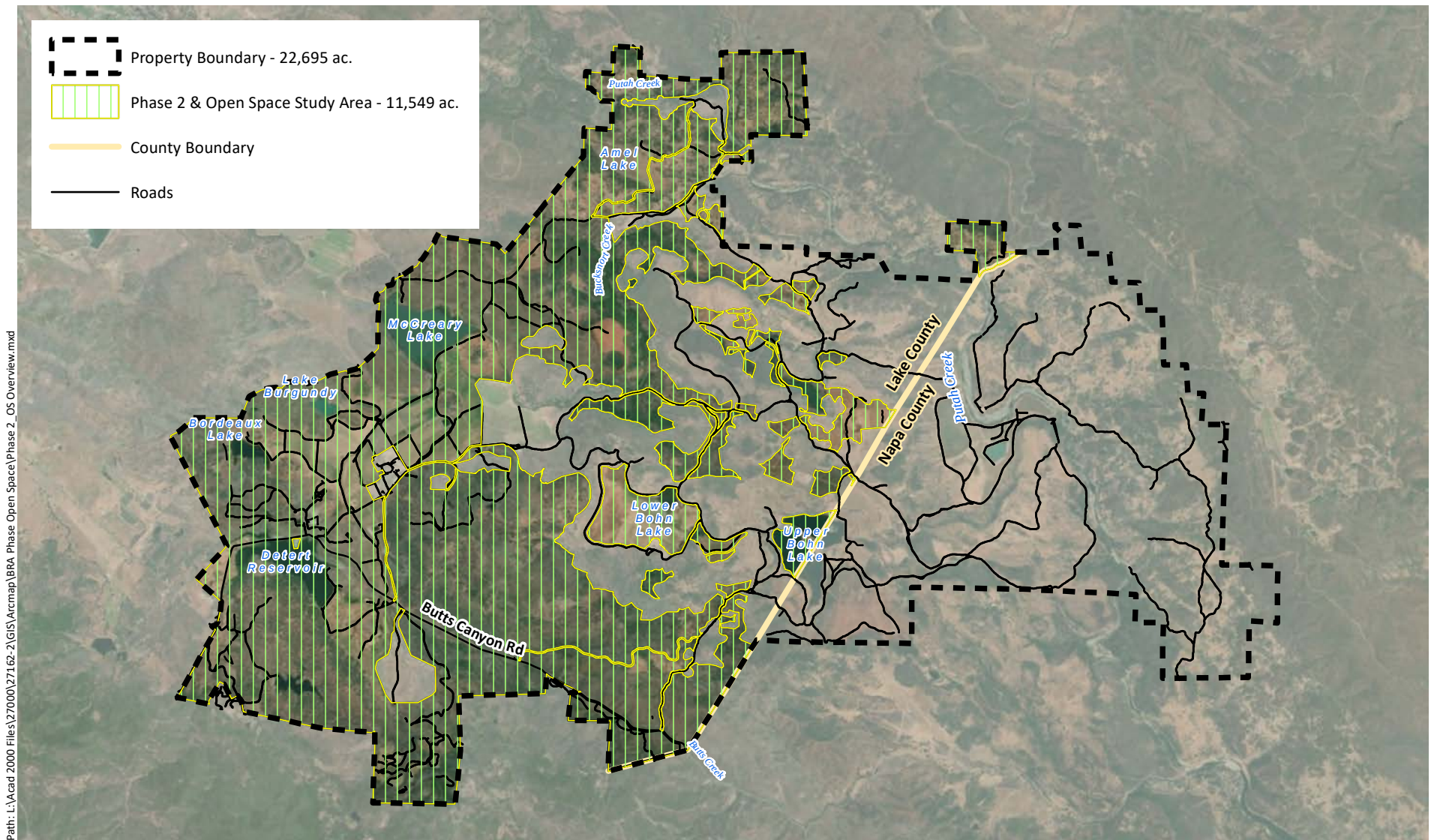


**Figure 1. Phase 2 and Open Space Study Area Location**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California



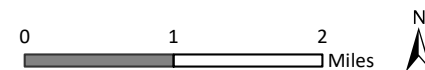




Sources: Esri Streaming - NAIP 2016, WRA | Prepared By: mrochelle, 7/19/2019

**Figure 2. Phase 2 and Open Space Study Area Overview**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California



### *2.1.2 Sensitive Biological Communities*

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act (CWA); state regulations such as the Porter-Cologne Act, the California Fish and Game Code (CFGC), and CEQA; or local ordinances such as the County of Lake's Municipal Code and Zoning Ordinance.

#### Sensitive Terrestrial Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDDB; CDFW 2019a). Sensitive plant communities are also identified on the CDFW's Natural Community List (CDFW 2019b) and in the Manual of California Vegetation (California Native Plant Society [CNPS] 2019a). Vegetation alliances are ranked 1 through 5 based on NatureServe's methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3). Specific habitats may also be identified as sensitive in city or county general plans or ordinances; the County of Lake specifically protects oak woodlands.

#### Sensitive Aquatic Communities

##### *Waters of the United States*

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the CWA. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as (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<sup>3</sup>; (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

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<sup>3</sup> 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.

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); (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.

Potential wetlands, as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Other areas such as streams and ponds, often referred to as “other waters”, are characterized by an ordinary high water mark (OHWM). The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

### *Waters of the State*

The term “Waters of the State” is defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes “isolated” wetlands and waters that may not be regulated by the Corps under Section 404 of the CWA. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

### *Streams, Lakes, and Riparian Habitat*

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600 to 1616 of the CFGC. Alterations to or work within or adjacent to streambeds or lakes generally require a Section 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself”. Removal of

riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

The County of Lake has developed a “Waterway Combining District” zoning designation that applies to all perennial and intermittent streams, including adjacent wetlands and riparian vegetation (Section 37 of the Zoning Ordinance). The County defines a protected riparian zone as an area extending:

- 30 feet from the top of bank any perennial stream,
- 20 feet from the top of bank of any intermittent stream,
- 20 feet from the edge of any adjacent wetlands or the ordinary high water mark of other bodies of water, or
- To the outer extent of vegetation dominated by common riparian species such as Fremont cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), box elder (*Acer negundo*), dogwood (*Cornus* spp.), willow (*Salix* spp.), and big leaf maple (*Acer macrophyllum*) (this latter zone may extend beyond 30 feet).

The County restricts development and other activities within the riparian zone defined above, with a number of exemptions for agriculture, management, and other resource-dependent activities as outlined in Sections 37.5 and 37.6 of the zoning ordinance.<sup>4</sup>

## 2.2 Special-Status Species

Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2019b) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded little or no protection under CEQA, but are included in this analysis for completeness. A description of the CNPS Ranks is provided below in Table 1.

The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species. Additionally, CDFW Species of Special Concern (SSC), CDFW California Fully Protected (CFP) species, USFWS Birds of Conservation Concern (BCC), and CDFW Special-Status Invertebrates (SSI) are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status and also considered under CEQA.

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<sup>4</sup> Section 30-9 of the County Municipal Code provides different watercourse setbacks based on stream class and erosion hazard ratings. Based on conversations with the Lake County Planning Department, WRA believes that the watercourse setbacks provided in Article 37 of the Zoning Ordinance take precedence.



In addition to regulations for species that carry a special designation, most native birds in the United States (including non-status species) have baseline protections under the federal Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC under sections 3503, 3503.5 and 3513. In addition to prohibiting the unauthorized intentional take of adult birds, these laws codes also prohibit the destruction or collection of active nests, including eggs and young.

Table 1. Description of CNPS California Rare Plant Ranks and Threat Codes

| <b>California Rare Plant Ranks (formerly known as CNPS Lists)</b> |                                                                          |
|-------------------------------------------------------------------|--------------------------------------------------------------------------|
| Rank 1A                                                           | Presumed extirpated in California and either rare or extinct elsewhere   |
| Rank 1B                                                           | Rare, threatened, or endangered in California and elsewhere              |
| Rank 2A                                                           | Presumed extirpated in California, but more common elsewhere             |
| Rank 2B                                                           | Rare, threatened, or endangered in California, but more common elsewhere |
| Rank 3                                                            | Plants about which more information is needed - A review list            |
| Rank 4                                                            | Plants of limited distribution - A watch list                            |
| <b>Threat Ranks</b>                                               |                                                                          |
| 0.1                                                               | Seriously threatened in California                                       |
| 0.2                                                               | Moderately threatened in California                                      |
| 0.3                                                               | Not very threatened in California                                        |

### Critical Habitat

Critical habitat is a term defined in the ESA as a designated geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery.

## **3.0 ENVIRONMENTAL SETTING**

The Property 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 Pope Valley; and to the west by Long Valley and Coyote Valley.

The approximately 11,550-acre Phase 2/Open Space 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 2/Open Space Study Area is shown on Figure 2.

### **3.1 Climate and Hydrology**

The Property 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.

The Property 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 Bucksnot 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. Many of the reservoirs within the property are connected through a network of natural streams and manmade ditches, allowing water to be moved across the site in response to management needs.

### **3.2 Geology and Soils**

The Property 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 acreage within the Phase 2/Open Space Study Area, as well as their parent material, is provided as Table 2. (California Soil Resources Lab [CSRL] 2019; USDA 1989). The ultramafic, or serpentine, origin of many of the soils found within the Phase 2/Open Space 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). Volcanic soils on the property may provide a similarly unique edaphic, or soil, condition that supports an atypically high diversity of native plants, including many special-status species.

In addition to the unique soil conditions found at Guenoc Ranch, a large portion of the site burned in the Valley Fire of 2015, resulting in ideal conditions for many special-status plants known to occur following fires (i.e., “fire followers”). These species are present in the seedbank, but often require a release from competition and a unique germination trigger associated with fire such as heat or smoke. The high numbers of special-status plants observed at the site is in part due to

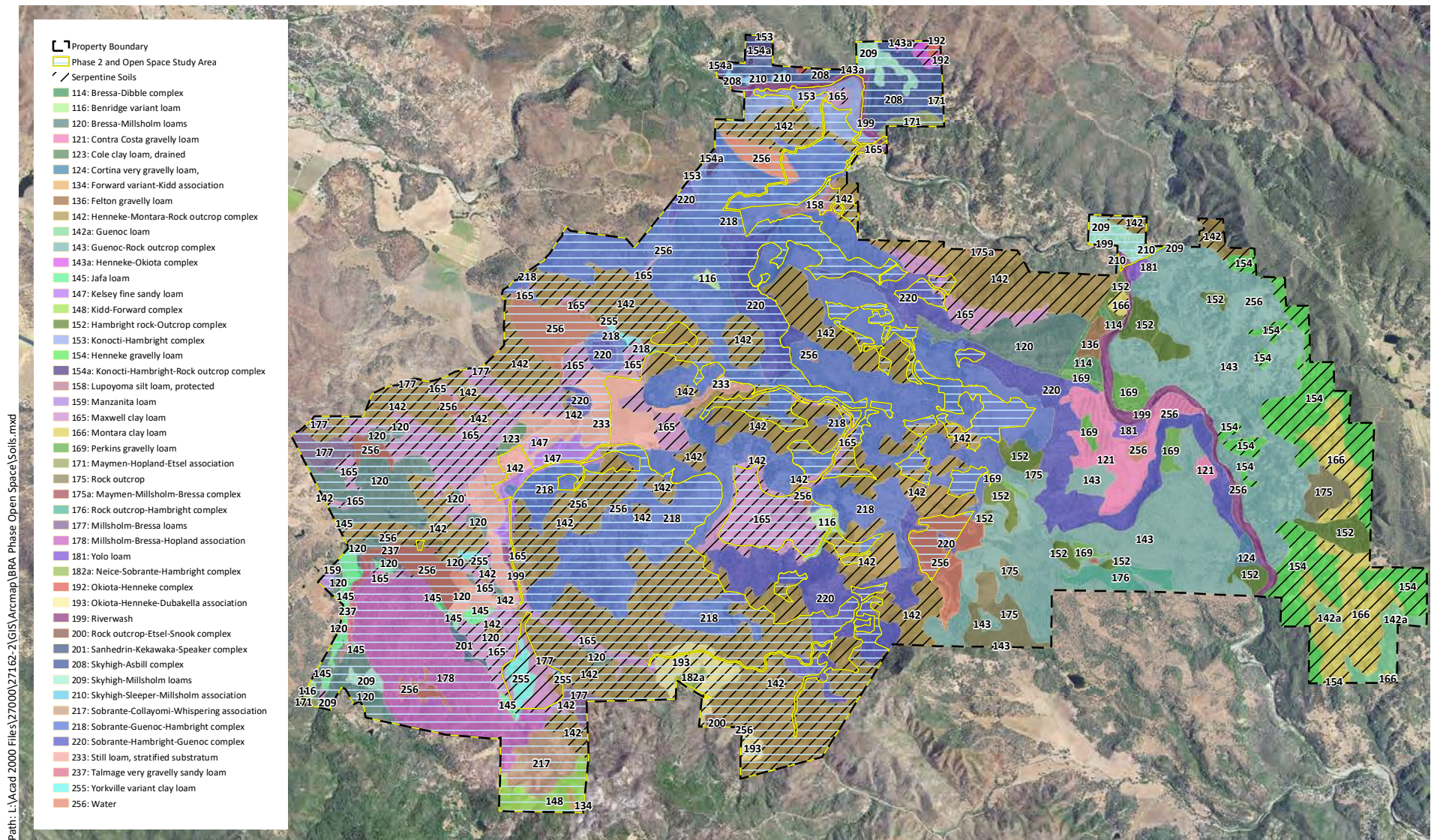
the recent fire, and it is likely that many of the occurrences will dwindle in size or disappear over time as communities develop toward climax conditions.

### **3.3 Vegetation and Land Use**

The Phase 2/Open Space 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 were historically converted for grazing lands, vineyards, or other agricultural uses. Much of the vegetation across the property burned during the Valley Fire of 2015, leaving many communities in an early seral stage of development, often with relict snags and downed woody debris giving evidence of the climax community that was present before the fire and may return over time.

## **4.0 METHODS**

On multiple dates in 2018 and 2019, the Phase 2/Open Space Study Area was traversed on foot to determine (1) plant communities present within the Phase 2/Open Space Study Area, (2) whether existing conditions provide suitable habitat for any special-status plant or wildlife species, and (3) whether sensitive habitats are present. A list of all survey dates and the associated level of effort (i.e., person hours) is provided as Table 3. The assessment was conducted at the reconnaissance level only and should not be considered comprehensive. All plant and wildlife species encountered during the surveys were documented. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2019), except where noted. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities. Detailed methods for each component of the assessment are provided in the following sections.



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

### Figure 3. Soils within the Property Boundary

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California

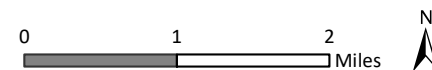




Table 2. Soils Mapped within the Phase 2 and Open Space Study Area

| Soil Map Unit                          | Parent Material                                        | Acres    |
|----------------------------------------|--------------------------------------------------------|----------|
| Benridge variant loam                  | Basalt                                                 | 43.50    |
| Bressa-Millsholm loams                 | Sandstone                                              | 519.53   |
| Cole clay loam, drained                | Mixed alluvium                                         | 23.36    |
| Forward variant-Kidd association       | Rhyolytic tuff and rhyolite                            | 10.04    |
| Guenoc-Rock outcrop complex            | Volcanic and metamorphic rocks (basaltic)              | 0.73     |
| Hambright rock-Outcrop complex         | Basic volcanic rock                                    | 0.11     |
| Henneke-Montara-Rock outcrop complex   | Serpentine                                             | 3,302.60 |
| Henneke-Okiota complex                 | Serpentine                                             | 28.87    |
| Jafa loam                              | Mixed alluvium                                         | 114.32   |
| Kelsey fine sandy loam                 | Mixed alluvium                                         | 97.46    |
| Kidd-Forward complex                   | Rhyolite and rhyolytic tuff                            | 114.40   |
| Konocti-Hambright complex              | Adesite, basalt, dacite and other basic igneous rock   | 112.00   |
| Konocti-Hambright-Rock outcrop complex | Adesite, basalt, dacite and other basic igneous rock   | 44.46    |
| Lupoyoma silt loam, protected          | Mixed alluvium                                         | 14.72    |
| Manzanita loam                         | Mixed alluvium                                         | 11.46    |
| Maxwell clay loam                      | Serpentine                                             | 1,132.44 |
| Maymen-Hopland-Etsel association       | Shale, schist, greenstone, sandstone, and conglomerate | 48.54    |
| Millsholm-Bressa loams                 | Sandstone, mudstone, and shale                         | 129.54   |
| Millsholm-Bressa-Hopland association   | Sandstone, mudstone, and shale                         | 799.67   |
| Neice-Sobrante-Hambright complex       | Basic igneous and metamorphic rocks                    | 18.66    |
| Okiota-Henneke complex                 | Serpentine                                             | 12.44    |
| Okiota-Henneke-Dubakella association   | Serpentine and other ultrabasic rocks                  | 166.41   |

| Soil Map Unit                             | Parent Material                                              | Acres            |
|-------------------------------------------|--------------------------------------------------------------|------------------|
| Perkins gravelly loam                     | Mixed alluvium                                               | 1.14             |
| Riverwash                                 | Mixed alluvium                                               | 82.09            |
| Rock outcrop-Etsel-Snook complex          | Sandstone and shale                                          | 11.42            |
| Sanhedrin-Kekawaka-Speaker complex        | Sandstone and sedimentary and metamorphic rocks              | 21.47            |
| Skyhigh-Asbill complex                    | Sandstone, siltstone, and shale                              | 277.18           |
| Skyhigh-Millsholm loams                   | Sandstone, mudstone, and shale                               | 161.44           |
| Skyhigh-Sleeper-Millsholm association     | Sandstone, siltstone, mudstone, and shale                    | 23.99            |
| Sobrante-Collayomi-Whispering association | Igneous (basic) and metamorphic rocks                        | 154.65           |
| Sobrante-Guenoc-Hambright complex         | Volcanic igneous (basic) and metamorphic rocks               | 2,473.92         |
| Sobrante-Hambright-Guenoc complex         | Volcanic igneous (basic) and metamorphic rocks               | 575.51           |
| Still loam, stratified substratum         | Sedimentary rocks                                            | 360.64           |
| Talmage very gravelly sandy loam          | Mixed alluvium                                               | 34.17            |
| Yolo loam                                 | Mixed alluvium                                               | 0.31             |
| Yorkville variant clay loam               | Chloritic schist and other sedimentary and metamorphic rocks | 31.90            |
| Water                                     | n/a                                                          | 594.12           |
| <b>Total:</b>                             |                                                              | <b>11,549.19</b> |

Table 3. Summary of Survey Dates and Level of Effort

| Survey Dates       | Survey Description                                  | Person Hours <sup>5</sup> |
|--------------------|-----------------------------------------------------|---------------------------|
| April 2-4, 2018    | Focused raptor surveys and general wildlife surveys | 90                        |
| April 24-26, 2018  | Focused raptor surveys and general wildlife surveys | 90                        |
| May 8-10, 2018     | Focused raptor surveys and general wildlife surveys | 90                        |
| May 22-24, 2018    | Focused raptor surveys and general wildlife surveys | 106                       |
| August 14-16, 2018 | Focused amphibian surveys                           | 40                        |
| April 24-26, 2019  | Special-status plant surveys, vegetation mapping    | 57                        |
| May 2-3, 2019      | Special-status plant surveys, vegetation mapping    | 40                        |
| May 7-9, 2019      | Special-status plant surveys, vegetation mapping    | 97                        |
| May 14-15, 2019    | General wildlife surveys and assessments            | 39                        |
| May 28, 2019       | Special-status plant surveys                        | 12                        |
| <b>Total:</b>      |                                                     | <b>661</b>                |

#### 4.1 Biological Communities

Prior to the site visits, detailed soil survey data for Lake and Napa counties was reviewed using the CSRL SoilWeb Google Earth application (2019) to determine whether any unique soil types that could support sensitive plant communities and/or aquatic features are present in the Phase 2/Open Space Study Area. WRA generated field maps at a scale sufficient (1:500) to navigate through the Phase 2/Open Space Study Area and to identify distinct features (e.g., changes in vegetation, individual trees, rock outcrops). Field maps contained recent (April – August 2016) high-quality aerial photographs overlain with 10-foot contour lines generated from LiDAR Point Cloud Data for Lake County (USGS 2015). Field maps were of sufficient resolution to allow biologists to hand-draw vegetation polygons and other features, with a ground resolution of 0.3 to 0.6 meter. Hand-drawn polygons were digitized in the office using ArcGIS software. Each biologist also carried a Trimble Geo XH GPS unit with sub-meter accuracy to map small-scale or localized features such as rare plant occurrences or wetland boundaries.

##### Terrestrial Communities

To map plant communities, WRA botanists traversed the site on foot during daylight hours and documented the plant communities observed using the field maps described above. Areas that were inaccessible due to dangerous or steep terrain, impenetrable chaparral, or dense poison

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<sup>5</sup> Includes overlap with surveys conducted within the Phase 1 portions of the property; those surveys are documented in a separate report (WRA 2019).



oak were observed from an appropriate vantage using binoculars to allow for identification of plant alliances and an assessment of the potential for special-status plant species to occur in those areas. During the site visits, biological communities present in the Phase 2/Open Space Study Area were classified based on a hierarchical approach combining the habitat- and physiognomic-based community descriptions in the CDFG publication *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) with the species-based plant alliance descriptions in the CDFW and CNPS *Manual of California Vegetation* (CNPS 2019a). In some cases, it was necessary to identify variants of community types or to describe ruderal or non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by their CDFW ranking (CDFW 2019b, CNPS 2019a), CEQA guidelines, and other applicable laws and regulations.

### Aquatic Communities

WRA conducted a desktop GIS analysis combined with limited field verification to document the approximate location and extent of aquatic communities within the Phase 2/Open Space Study Area. Stream flowlines were modeled in ArcGIS using high-resolution topographic data derived from the Lake County LiDAR (USGS 2015). Where possible, the location of the top of bank and/or ordinary high water mark was visually estimated from recent, high-resolution aerial imagery. The location of wetlands was approximated using a combination of wetland signatures visible in aerial imagery and a depression analysis conducted in ArcGIS. The GIS-based mapping was supplemented by observations of wetland conditions by WRA biologists in a subset of locations across the Phase 2/Open Space Study Area.

## **4.2 Special-Status Species**

### Literature Review

The potential occurrence of special-status species in the Phase 2/Open Space Study Area was evaluated by first determining which special-status species occur in the vicinity of the Phase 2/Open Space Study Area through a literature and database review. Database searches for known occurrences of special-status species focused on the 7.5-minute USGS quadrangles that include and surround the Phase 2/Open Space Study Area: Aetna Springs, Calistoga, Chiles Valley, Clearlake Highlands, Detert Reservoir, Glascock Mountain, Jericho Valley, Knoxville, Lower Lake, Mark West Springs, Middletown, Mount Saint Helena, Saint Helena, Walter Springs, Whispering Pines, and Wilson Valley. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of these quadrangles:

- California Natural Diversity Database (CDFW 2019a)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2019)
- CNPS Rare Plant Inventory (CNPS 2019b)
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- CDFW publication *Fish Species of Special Concern in California* (Moyle et. al. 2015)
- USFWS publication *Birds of Conservation Concern* (2008)
- Western Bat Working Group Online Species Accounts (2019)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)

## Site Assessment

During the site assessment, WRA biologists surveyed a representative sample of the Phase 2/Open Space Study Area by truck and on foot to document the type and condition of habitats present. Habitat conditions observed within the Phase 2/Open Space Study Area were evaluated for their potential to support special-status plant and wildlife species documented from the literature and database review. The potential for each special-status species to occur in the Phase 2/Open Space Study Area was then evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity to determine its potential to occur within the Phase 2/Open Space Study Area. The site assessment does not constitute a protocol-level survey and is not intended to determine the actual presence or absence of a species; however, all special-status species observed incidentally during the site visits were documented. The locations of observed special-status plant species were recorded using a combination of Trimble Geo XH GPS units with sub-meter accuracy and hand-drawn locations on field maps that contained recent (April – August 2016), high-resolution (0.3- to 0.6-meter ground resolution) aerial photographs overlain with 10-foot contours. Hand-drawn locations were digitized in the office using ArcGIS software.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats in question. If necessary, recognized experts in individual species biology were contacted to obtain the most up to date information regarding species biology and ecology.

For some species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, a species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described below in Section 6.0.

## Special-Status Plants

WRA biologists conducted reconnaissance-level special-status plant surveys within the Phase 2/Open Space Study Area on multiple dates in 2018 and 2019 (Table 3). In 2018, a limited portion of the Phase 2/Open Space Study Area found on serpentine soils was subjected to a full suite of seasonally-timed surveys, including early-, mid-, and late-season surveys—surveys in these areas may provide a good indication of the special-status plant diversity to be expected in other serpentine portions of the Phase 2/Open Space Study Area. Other portions of the Phase 2/Open Space Study Area were subject to late-season surveys only in 2018. The majority of the Phase 2/Open Space Study Area was subject to limited spot-checks of specific areas during May and June, 2019. A map showing the spatial distribution and timing of special-status plant survey efforts within the Phase 2/Open Space Study Area is included in Appendix E.

## Special-Status Wildlife

### *General Wildlife Surveys*

WRA biologists conducted biological site assessments and general wildlife surveys within the Phase 2/Open Space Study Area on multiple dates in 2018 and 2019 (Table 3). Wildlife observations made over that time period are included in this report. Surveys for fish and amphibian species were conducted in and around aquatic features using the naked eye and binoculars. A Sonobat recording device was deployed on the nights of August 14 and 15, 2018 at a small in-line reservoir in the Phase 1 Study Area determined to contain suitable bat habitat located south of the vineyards at Lower Bohn Lake. Audio generated from the recording device was analyzed using Sonobat software to determine which bat species are present within the area. Based on the similarity of habitats, species determined to be present in the Phase 1 Study Area are assumed to be present in the Phase 2/Open Space Study Area.

In addition to general wildlife surveys, WRA conducted several rounds of focused wildlife surveys, which investigated the Phase 2/Open Space Study Area for the presence of raptors and special-status amphibians. The methods of those focused surveys are described below.

### *Raptor Surveys*

In 2018, twelve (12) days of focused raptor surveys were conducted over the course of four periods, April 2-4, April 24-26, May 8-10, and May 22-24. Over this two month period, 50 fixed point surveys were conducted during weather conducive to visual and auditory detections of raptors. Survey points were chosen based on a GIS viewshed analysis, which maximized the Phase 1 Study Area within line of site. However, many of these vantage points were within the Phase 2/Open Space Study Area and also covered a large portion of the Phase 2/Open Space Study Area in line of site. All raptor observations within the property were documented. In addition to fixed point surveys, 27 roving surveys were conducted within the property, both from vehicle and on foot. These surveys were focused on covering “blind spots” of the Phase 1 Study Area that were not directly visible from the fixed observation points. Much of the Phase 2/Open Space Study Area was also covered during roving surveys. For a detailed description of the methods used during focused raptor surveys, see Appendix H in the Phase 1 BRA (WRA 2019).

## *Amphibian Visual Encounter Surveys*

On August 14-16, 2018 and May 14-15, 2019, WRA biologists conducted nighttime focused surveys for special-status native anurans, including California red-legged frog (*Rana draytonii*; CRLF) and foothill yellow-legged frog (*Rana boylei*; FYLF), at selected habitats across the property. Stock ponds and other impoundments selected for surveys were smaller, more remote habitat features that were relatively isolated from large reservoirs and operational agricultural basins that were more often support non-native aquatic predators. These smaller, isolated features were determined to have the highest potential to host CRLF, if present, due to their relative lack of predatory fish and bullfrogs compared to larger ponds and reservoirs which are connected by streams and manmade channels that allow these invasive species to move from one feature to another. Additionally, select reaches of several streams were also surveyed for the presence of FYLF and CRLF. Biologists traversed aquatic features by foot using flashlights and binoculars to detect species eyeshine within and adjacent to the aquatic features.

## **5.0 RESULTS**

The following sections summarize the results of WRA's surveys from 2018 to 2019 within the Study Area for Phase 2 and the Open Space. An overview of biological communities observed within the Phase 2/Open Space Study Area is provided as Table 4. Maps showing the location and extent of biological communities are provided as Appendix A; maps showing the location and extent of aquatic resources and riparian habitat are provided as Appendix B. A list of all plant species observed within the Phase 2/Open Space Study Area is provided as Appendix C. A summary of the special-status plant species documented from the region and their potential to occur within the Phase 2/Open Space Study Area is provided as Appendix D. Maps showing the special-status plant species observed within the Phase 2/Open Space Study Area are provided as Appendix E. A list of all wildlife species observed within the Phase 2/Open Space Study Area is provided as Appendix F. A summary of the special-status wildlife species documented from the region and their potential to occur within the Phase 2/Open Space Study Area is provided as Appendix G. Representative photographs of the Phase 2/Open Space Study Area are provided as Appendix H. Results of focused raptor surveys are provided in the Phase 1 BRA (WRA 2019).

### **5.1 Biological Communities**

Table 4 summarizes the area of each biological community type observed in the Phase 2/Open Space Study Area, including 12 non-sensitive communities or other non-vegetated land use designations and 13 sensitive communities. Biological communities and other land use designations mapped in the Phase 2/Open Space Study Area are shown in Appendix A; aquatic resources and riparian habitat are shown in Appendix B. Descriptions for biological communities observed in the Phase 2/Open Space Study Area are described below, organized by non-sensitive and sensitive habitats and by growth form (i.e., tree, shrub, herb), with alliances listed alphabetically therein.

Table 4. Biological Communities Mapped within the Phase 2/Open Space Study Area

| Vegetation Structure/<br>Land Use | Community<br>(Holland 1986)                          | Vegetation Alliance<br>(CDFW 2019b, CNPS 2019a)                                                                   | Sensitive Status       | Rarity<br>Ranking | Acres within<br>P2/OS Study<br>Area |
|-----------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|-------------------------------------|
| <b>Terrestrial Communities</b>    |                                                      |                                                                                                                   |                        |                   |                                     |
| <b>Tree-<br/>dominated</b>        | White alder riparian forest                          | White alder groves<br><i>Alnus rhombifolia</i> Forest Alliance                                                    | Sensitive <sup>6</sup> | G4S4              | 10.23                               |
|                                   | Northern interior cypress forest                     | Sargent cypress woodland<br><i>Hesperocyparis sargentii</i> woodland alliance                                     | Sensitive              | G3S3              | 10.65                               |
|                                   | Serpentine digger [foothill] pine-chaparral woodland | Foothill pine woodland<br><i>Pinus sabiniana</i> woodland alliance                                                | Non-sensitive          | G4S4              | 1,050.24                            |
|                                   | Coast Range mixed coniferous forest                  | Douglas fir forest<br><i>Pseudotsuga menziesii</i> Forest Alliance                                                | Non-sensitive          | G5S4              | 61.45                               |
|                                   | Oak forest                                           | Mixed oak forest<br><i>Quercus (agrifolia, douglasii, garryana, kelloggii, lobata, wislizeni)</i> Forest Alliance | Sensitive              | G4S4              | 174.88                              |
|                                   | Blue oak woodland                                    | Blue oak woodland<br><i>Quercus douglasii</i> woodland alliance                                                   | Sensitive <sup>7</sup> | G4S4              | 2,431.25                            |
|                                   | Blue oak woodland                                    | Blue oak savanna<br><i>Quercus douglasii</i> woodland alliance                                                    | Sensitive <sup>6</sup> | G4S4              | 752.84                              |
|                                   | Valley oak woodland                                  | Valley oak woodland<br><i>Quercus lobata</i> woodland alliance                                                    | Sensitive              | G3S3              | 6.62                                |

<sup>6</sup> Although not considered a sensitive plant community by the CDFW, where they occur within the Study Area, white alder groves qualify as forested wetlands and/or riparian vegetation and are therefore treated as sensitive.

<sup>7</sup> Although not considered a sensitive plant community by the CDFW, blue oak woodland, blue oak savanna, interior live oak woodland, and mixed oak woodland are protected by the County of Lake and are therefore treated as sensitive.

| Vegetation Structure/<br>Land Use | Community<br>(Holland 1986)   | Vegetation Alliance<br>(CDFW 2019b, CNPS 2019a)                                            | Sensitive Status       | Rarity<br>Ranking | Acres within<br>P2/OS Study<br>Area |
|-----------------------------------|-------------------------------|--------------------------------------------------------------------------------------------|------------------------|-------------------|-------------------------------------|
| <b>Tree-dominated</b>             | Interior live oak woodland    | Interior live oak woodland<br><i>Quercus wislizeni</i> forest alliance                     | Sensitive <sup>6</sup> | G4S4              | 437.93                              |
| <b>Shrub-dominated</b>            | Deer weed scrub               | Deer weed scrub<br><i>Acmispon glaber</i> [ <i>Lotus scoparius</i> ]<br>shrubland alliance | Non-sensitive          | G5S5              | 15.01                               |
|                                   | Chamise chaparral             | Chamise chaparral<br><i>Adenostoma fasciculatum</i> shrubland<br>alliance                  | Non-sensitive          | G5S5              | 445.83                              |
|                                   | Serpentine chaparral          | Whiteleaf manzanita chaparral<br><i>Arctostaphylos viscida</i> shrubland<br>alliance       | Non-sensitive          | G4S4              | 69.37                               |
|                                   | Serpentine chaparral          | Musk brush chaparral <sup>8</sup><br><i>Ceanothus jepsonii</i> shrubland<br>alliance       | Sensitive <sup>9</sup> | n/a               | 2.01                                |
|                                   | Serpentine chaparral          | California yerba santa scrub<br><i>Eriodictyon californicum</i> shrubland<br>alliance      | Non-sensitive          | G4S4              | 30.24                               |
|                                   | Scrub oak chaparral           | Scrub oak chaparral<br><i>Quercus berberidifolia</i> shrubland<br>alliance                 | Non-sensitive          | G4S4              | 9.67                                |
|                                   | Leather oak chaparral         | Leather oak chaparral<br><i>Quercus durata</i> shrubland alliance                          | Non-sensitive          | G4S4              | 2,256.87                            |
|                                   | North coast riparian<br>scrub | Brewer willow thickets<br><i>Salix breweri</i> Shrubland Alliance                          | Sensitive              | G2S2              | 1.37                                |

<sup>8</sup> This community or land use designation is not described by Holland (1986), CDFW (2019b), or CNPS (2019b).

<sup>9</sup> Although CDFW does not recognize this community as its own alliance, it does recognize a leather oak – musk brush provisional association, which is sensitive (CDFW 2018a); therefore, this community is treated as sensitive.



| <b>Vegetation Structure/<br/>Land Use</b> | <b>Community<br/>(Holland 1986)</b> | <b>Vegetation Alliance<br/>(CDFW 2019b, CNPS 2019a)</b>                                                                                                    | <b>Sensitive Status</b> | <b>Rarity<br/>Ranking</b> | <b>Acres within<br/>P2/OS Study<br/>Area</b> |
|-------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------|----------------------------------------------|
| <b>Herb-dominated</b>                     | Non-native grasslands               | Multiple                                                                                                                                                   | Non-sensitive           | n/a                       | 1,347.90                                     |
| <b>Herb-dominated</b>                     | Valley needlegrass grasslands       | Purple needle grass grasslands – (an association of needle grass – melic grass grassland [ <i>Nassella</i> spp. – <i>Melica</i> spp. Herbaceous Alliance]) | Sensitive <sup>10</sup> | G4S4                      | 0.77                                         |
| <b>Aquatic Communities</b>                |                                     |                                                                                                                                                            |                         |                           |                                              |
| <b>Emergent Wetlands</b>                  | Multiple                            | Multiple                                                                                                                                                   | Sensitive               | Multiple                  | 330.00                                       |
| <b>Ponds and Reservoirs</b>               | n/a                                 | n/a                                                                                                                                                        | Sensitive               | n/a                       | 626.08                                       |
| <b>Streams</b>                            | n/a                                 | n/a                                                                                                                                                        | Sensitive               | n/a                       | 147.85<br>(736,004 lf)                       |
| <b>Other Land Use Designations</b>        |                                     |                                                                                                                                                            |                         |                           |                                              |
| <b>Agriculture</b>                        | n/a                                 | n/a                                                                                                                                                        | Non-sensitive           | n/a                       | 1,170.67                                     |
| <b>Developed</b>                          | n/a                                 | n/a                                                                                                                                                        | Non-sensitive           | n/a                       | 136.75                                       |
| <b>Rock Outcrop</b>                       | n/a                                 | n/a                                                                                                                                                        | Non-sensitive           | n/a                       | 22.70                                        |
| <b>Total:</b>                             |                                     |                                                                                                                                                            |                         |                           | <b>11,549.19</b>                             |

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<sup>10</sup> Although the broader needle grass – melic grass grassland alliance is not considered sensitive, the purple needle grass grassland association is considered sensitive by the CDFW and native grasslands are generally protected under CEQA.

### 5.1.1 Non-Sensitive Biological Communities

#### Non-Sensitive Tree-Dominated Communities

**Foothill pine woodland (*Pinus sabiniana* Woodland Alliance); Rank G4S4.** Foothill pine woodland typically occurs on streamside terraces, valleys, slopes and ridges on shallow, often infertile, moderately drained soils throughout cismontane California. Often this alliance is intermixed with chaparral (CNPS 2019b). Within the Phase 2/Open Space Study Area, foothill pine woodland was located along alluvial terraces and on both rocky and finer-substrate slopes. On rocky substrates, it occurred with a chaparral understory, often on serpentine soils. In these situations, the overstory was composed of open foothill pine. The understory was variously composed of open to dense shrubs, including whiteleaf manzanita (*Arctostaphylos viscida*), leather oak (*Quercus durata*), and California yerba santa (*Eriodictyon californicum*). Herbaceous cover was typically of low density and included species such as woolly sunflower (*Eriophyllum lanatum*), small fescue (*Festuca microstachys*), golden buckwheat (*Eriogonum luteolum* var. *luteolum*), and Napa cryptantha (*Cryptantha hispidula*). Where soils are less rocky, foothill pine woodland often occurred in mixed stands of blue oak (*Quercus douglasii*) woodland and savanna. In such situations, blue oak was co- or subdominant in the overstory, with overall canopy cover ranging from closed to somewhat open. The understory shrubs are generally sparse, consisting of species such as common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*) and poison oak (*Toxicodendron diversilobum*). Where canopy cover is dense, herbaceous cover is typically sparse. Where canopy cover is more open, the herbaceous layer is often dense grassland characterized by non-native annual species.

Foothill pine woodland intergrades with leather oak scrub, California yerba santa chaparral, whiteleaf manzanita scrub, blue oak woodland, and interior live oak woodland. In many areas, foothill pine was the dominant tree species prior to the Valley Fire of 2015, but was killed in the fire and is giving way to resprouting leather oak or California yerba santa. In these areas, the vegetation was mapped as foothill pine woodland if a large number of trees survived the fire; however, if only a small number of pines survived, the vegetation was mapped based on the dominant understory shrub, generally leather oak or yerba santa.

The foothill pine woodland alliance is considered non-sensitive; however, there may be sensitive associations within the alliance present within the Phase 1 Study Area such as the foothill pine – leather oak provisional association (CDFW 2018a).

**Douglas fir forest (*Pseudotsuga menziesii* Forest Alliance); Rank G5S4.** Douglas fir forest occurs on all topographic positions and aspects on various substrates, including serpentine, throughout coastal and cismontane northern and central California (CNPS 2019a). Within the Phase 2/Open Space Study Area, Douglas fir forest occurs in the far southern portion of the Study Area, on volcanic substrates on the steep slopes above the vineyards on the south side of Butts Canyon Road. The canopy is dense and dominated by Douglas fir, with occasional subdominance by canyon live oak (*Quercus chrysolepis*), California black oak (*Q. kelloggii*), and madrone (*Arbutus menziesii*). The understory is typically open and sparse. Douglas fir forest is considered non-sensitive.

#### Non-Sensitive Shrub-Dominated Communities

**Deer weed scrub (*Acmispon glaber* shrubland Alliance); Rank G5S5.** Deer weed scrub typically occurs in areas of recent disturbance such as clearing, fire, or intermittent flooding throughout cismontane California (CNPS 2019b). Within the Phase 2/Open Space Study Area,

this alliance was observed in a limited number of areas affected by the Valley Fire of 2015, and it is expected that this community will transition into other shrub- or tree-dominated alliances in the years and decades to come. Trees were generally absent. The shrub layer was open to dense, dominated by deer weed, with lower cover of leather oak, yerba santa, and pitcher sage (*Lepechinia calycina*). The herbaceous layer was denser in more open stands and was characterized by annual grasses such as small fescue and soft chess (*Bromus hordeaceus*). Deer weed scrub is considered non-sensitive.

**Chamise chaparral (*Adenostoma fasciculatum* Shrubland Alliance); Rank G5S5.** Chamise chaparral is known from the interior North Coast Ranges south to interior and coastal South Coast Ranges, Transverse Ranges, and Sierra Nevada Foothills. This community is typically located on steep, dry, south-facing terrain underlain by shallow, often nutrient-poor (e.g., serpentine), well-drained substrates (CNPS 2019b). Within the Phase 2/Open Space Study Area, this community is located primarily on south-facing aspects and ridgelines underlain by well-drained stony clay loam derived from volcanic parent material and to a lesser extent from serpentine parent material. Chamise chaparral was typically dense and often composed of monotypic stands of chamise. Occasional other shrub species were present, including leather oak and yerba santa. Occasional trees were present, including foothill pine, blue oak, and interior live oak. The herbaceous layer is typically sparse to absent, particularly in dense stands. In more open stands, the interstitial areas are characterized by sparse annual herbs.

Chamise chaparral is considered a non-sensitive alliance. However, there may be sensitive associations within the alliance present within the Phase 1 Study Area such as the leather oak – chamise provisional association (CDFW 2018a).

**Whiteleaf manzanita chaparral (*Arctostaphylos viscida* Shrubland Alliance); Rank G4S4.** Whiteleaf manzanita chaparral occurs on ridges and upper slopes on shallow, weathered substrate developed from sandstone, granitic, or ultramafic substrates in the northern and central cismontane mountain ranges of California (CNPS 2019b). Stands of whiteleaf manzanita chaparral were found at scattered locations within the Phase 2/Open Space Study Area on gently to moderately sloped serpentine substrates. The tree layer is sparse to absent, comprised of foothill pine and interior live oak. The shrub layer is typically dense and tall, dominated by whiteleaf manzanita, with leather oak, chamise, yerba santa, and toyon (*Heteromeles arbutifolia*). The herbaceous layer is often sparse, composed of species such as woolly sunflower, small fescue, and Napa cryptantha. In many areas, whiteleaf manzanita was present at high cover, but was mixed with foothill pine at greater than 10 percent cover, and in these areas, the vegetation was mapped as foothill pine woodland.

Whiteleaf manzanita chaparral is considered a non-sensitive alliance. However, there may be sensitive associations within the alliance present within the Phase 2/Open Space Study Area such as the whiteleaf manzanita – musk brush provisional association (CDFW 2018a).

**California yerba santa scrub (*Eriodictyon californicum* Shrubland Alliance); Rank G4S4.** California yerba santa scrub typically occurs on lower to middle slopes of serpentine, metavolcanic, and plutonic substrates in the eastern foothills of the Northern Coast Range and along the western foothills of the Sierra Nevada Range in California (CNPS 2019b). Within the Phase 2/Open Space Study Area, California yerba santa scrub typically occurs in areas that burned in the 2015 Valley Fire, on rocky, serpentine and volcanic substrates. Stands range from dense to open, with the interstitial areas characterized by sparse herbs. The tree layer is sparse to absent and composed of foothill pine, blue oak, or interior live oak. The shrub layer is dominated by California yerba santa with chamise, buckbrush, deer weed, poison oak, and leather

oak as sub-dominants. In many areas, this community forms a patchwork mosaic within larger stands of leather oak chaparral and chamise chaparral, making it difficult to draw distinctions between the California yerba santa scrub and the other two communities. In this cases, smaller stands of California yerba santa scrub were lumped into the larger surrounding community, whether leather oak or chamise. California yerba santa scrub is best described under Holland's mixed serpentine chaparral. California yerba santa scrub is considered non-sensitive.

**Scrub oak chaparral (*Quercus berberidifolia* Shrubland Alliance); Rank G4S4.** Scrub oak chaparral typically occurs on steep, north-facing slopes on deep to shallow, well-drained soils throughout cismontane California. This vegetation alliance is dominated by scrub oak in the shrub layer canopy with several other scrubby species present such as leather oak, yerba santa, and toyon. Emergent trees may be present at low cover (CNPS 2019b). Within the Phase 2/Open Space Study Area, scrub oak chaparral was located in a limited number of locations, typically on northern and eastern slopes on serpentine soils and along ridgelines and dry slopes on non-serpentine soils. Scrub oak chaparral is considered non-sensitive.

**Leather oak chaparral (*Quercus durata* Shrubland Alliance); Rank G4S4.** Leather oak chaparral is known from the North and Central Coast Ranges and Sierra Nevada Foothills from Del Norte County south to Santa Barbara County. This vegetation alliance is typically located on hills, steep slopes, and ridgelines underlain by shallow, rocky substrate derived from serpentine soils (CNPS2019b). Within the Phase 2/Open Space Study Area, leather oak chaparral is located on a range of aspects and on ridgelines underlain by soils derived from serpentine; often intergrading with foothill pine woodland. In areas affected by the Valley Fire, leather oak represents the dominant shrub, re-sprouting from its base in all but the most severely burned areas. The shrub canopy is generally open in areas burned during the Valley Fire and dense in unburned areas. Tree cover is sparse to absent, typically consisting of foothill pine. The shrub canopy is dominated by leather oak, with occasional co- or sub-dominance by toyon, yerba santa, whiteleaf manzanita, and chamise.

Leather oak chaparral is considered a non-sensitive alliance; however, there may be associations within this alliance that are considered sensitive by the CDFW such as the foothill pine – leather oak provisional association or the leather oak – chamise provisional association.

#### Non-Sensitive Herb-Dominated Communities

**Non-native annual grasslands (various Semi-Natural Herbaceous Stands); No Rank.** Non-native annual grasslands occur throughout California on all aspects and topographic positions underlain by a variety of substrates. Within the Phase 2/Open Space Study Area, non-native annual grasslands include elements of multiple vegetation alliances including:

- Wild oat grass grasslands (*Avena barbata*, *A. fatua* Herbaceous Semi-Natural Alliance); No Rank
- Annual brome grasslands (*Bromus diandrus*, *B. hordeaceus* – *Brachypodium distachyon* Herbaceous Semi-Natural Alliance); No Rank
- Wild barley grasslands (*Hordeum murinum* Herbaceous Semi-Natural Alliance; undescribed); No Rank
- Perennial ryegrass fields (*Festuca perennis* Herbaceous Semi-Natural Alliance); No Rank
- Barbed goat grass patches (*Aegilops triuncialis* Provisional Herbaceous Semi-Natural Alliance); No Rank

- Cheatgrass – medusahead grassland (*Bromus tectorum* - *Elymus caput-medusae* Herbaceous Semi-Natural Alliance); No Rank
- Yellow star-thistle fields (*Centaurea [solstitialis, melitensis]* Herbaceous Semi-Natural Alliance); No Rank

These grasslands are located on all aspects and topographic positions, and are underlain by nearly all mapped soil units found within the Phase 2/Open Space Study Area. Non-native annual grasslands are considered non-sensitive. Yellow star-thistle fields is included in this category because this species typically occurred within the matrix of grasses. In cases where non-native annual grasslands occurred in seasonal wetland habitat, they were mapped as seasonal wetlands, rather than as grasslands and their acreage is incorporated into the seasonal wetland acreage reported in Table 4.

#### Other Non-Sensitive Land Use Designations

**Agriculture.** Large portions of the Phase 2/Open Space Study Area have been or are currently being converted to vineyard production. Areas of existing vineyards, as well as areas with active clearing, planting, and other vineyard creation activities were mapped as agricultural areas. These areas contain some natural vegetation, primarily non-native, weedy annual species, but in large part are dominated by grape vines with little to no understory. Soils within these areas are regularly disturbed, greatly reducing their potential to host special-status plants. Agricultural areas are not considered sensitive.

**Developed.** Some portions of the Phase 2/Open Space Study Area were historically converted to development supporting agriculture and ranching activities; these areas include roadways, work yards, barns, ranch houses, driveways, and other associated buildings and features, as well as landscaped vegetation such as lawns. Developed areas are not considered sensitive.

**Rock Outcrop.** While not described in the literature and generally considered non-sensitive, rock outcrops may provide important habitat features for special-status plant and wildlife species. Vegetation is typically absent to sparse, although some stunted vegetation may be present. Within the Phase 2/Open Space Study Area, rock outcrops occurred as large cliff faces and denuded serpentine ridges and other outcroppings.

#### 5.1.2 Sensitive Biological Communities

##### Sensitive Tree-Dominated Communities

**White alder groves (*Alnus rhombifolia* Forest Alliance); Rank G4S4.** White alder groves typically occurs along riparian corridors, incised canyons, seeps, stream banks, mid-channel bars, floodplains, and stream terraces throughout California (CNPS 2019b). White alder is typically co-dominant with a variety of other riparian trees. The shrub layer is generally sparse to absent, and the herbaceous layer is variable. Within the Phase 2/Open Space Study Area, white alder groves occur along a low-gradient portion of Butcherknife Creek, where it occurred as the dominant with a mix of sedge and grass species in the understory. Where white alder groves occur within the Phase 1 Study Area, they qualify as forested wetlands subject to federal and state regulation. Although this alliance is not considered sensitive by the CDFW, because it is considered wetland habitat, it is treated as a sensitive community here. In addition, there may be sensitive associations within this alliance present within the Phase 1 Study Area such as white alder – American dogwood association or the white alder – western azalea association (CDFW 2018a).

**Sargent cypress woodland (*Hesperocyparis sargentii* Woodland Alliance); Rank G3S3.**

Sargent cypress woodland typically occurs on stream benches and terraces, open slopes, and ridges on ultramafic substrates in the northern and central California Coast Ranges. Sargent cypress tends to form pure stands in its southern range and mixed stands with species such as McNab cypress (*H. macnabiana*), foothill pine, and California bay in its northern range (CNPS 2019b). Within the Phase 2/Open Space Study Area, Sargent cypress woodland was observed in small areas south of Butts Canyon Road, typically on gentle, north-facing slopes on serpentine substrates. The tree canopy is dense to open, consisting of Sargent cypress with occasional foothill pine. Under dense canopy, the understory is sparse to absent. Where the canopy is more open, the interstitial areas are characterized by dense shrubs such as whiteleaf manzanita and leather oak. Sargent cypress woodland is considered a sensitive vegetation alliance by the CDFW.

**Mixed oak forest (*Quercus [douglasii, kelloggii, wislizeni]* Forest Alliance); Rank G4S4.**

Mixed oak forest occurs on valleys and gentle to steep slopes on moderately deep soils in the northern and central California coast and Coast Ranges (CNPS 2019a). Within the Phase 2/Open Space Study Area, mixed oak forest was mapped in the southern portion of the Study Area on volcanic substrates on the steep slopes adjacent to the vineyards south of Butts Canyon Road. Blue oak, interior live oak, and California black oak were co-dominant in the tree canopy. In addition to the previously listed oak species, other tree and shrub species include madrone, California bay (*Umbellularia californica*), leather oak, birch-leaf mountain mahogany (*Cercocarpus betuloides*), poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and deer brush. In certain areas, the canopy is dense, in others it is open, resembling open woodland, with the interstitial areas characterized by dense annual herb species. Although it is not considered a sensitive alliance by the CDFW, mixed oak woodland is protected by the County of Lake.

**Blue oak woodland & savanna (*Quercus douglasii* Woodland Alliance); Rank G4S4.** Blue oak woodland and savanna are typically located on valley bottoms, foothills, and rocky outcrops on shallow, moderately to excessively drained soil low in fertility throughout cismontane California. Blue oaks are dominant or co-dominant with other oak species and species such as buckeye (*Aesculus californica*) and foothill pine. The canopy of blue oak woodland is typically intermittent to continuous, often occurring as broad savanna (CNPS 2019b). Within the Phase 2/Open Space Study Area, blue oak woodland and savanna was observed on valley bottoms and slopes, typically on deeper, finer-textured serpentine and volcanic soils.

Although CDFW does not distinguish between blue oak woodland and savanna, blue oak habitats were mapped into these two categories to facilitate impact and mitigation calculations. Blue oak woodland and savanna were differentiated by a desktop visual assessment of tree density and canopy closure. Savanna included areas with approximately 60 percent or less total canopy cover and with less than two thirds of tree canopies touching; areas with greater cover of blue oaks or a higher percentage of tree canopies touching were considered woodland. Although it is not considered a sensitive alliance by the CDFW, blue oak woodland and savanna is protected by the County of Lake.

**Valley oak woodland (*Quercus lobata* Woodland Alliance); Rank G3S3.** Valley oak woodland is known from the southern Cascade Range, Coast Ranges, Central Valley, Transverse Range, and Sierra Valley Foothills from Siskiyou County south to Los Angeles County. This community is typically located on deep, poorly drained clay soils in valley bottoms, alluvial floodplains, and lower slopes (CNPS 2019b). Within the Phase 2/Open Space Study Area, valley oak woodland was observed in alluvial terraces along perennial streams. Canopy cover was continuous to intermittent, dominated by valley oak with scattered arroyo willow (*Salix lasiolepis*) and Fremont cottonwood. Valley oak woodland is considered a sensitive vegetation alliance by the CDFW, and where it occurs within the Phase 2/Open Space Study Area, it would generally be considered riparian vegetation, adding an additional layer of protection. Valley oak woodland is also protected by the County of Lake.

**Interior live oak woodland (*Quercus wislizenii* Woodland Alliance); Rank G4S4.** Interior live oak woodland typically occurs on upland slopes, valley bottoms, and terraces on shallow, moderately to excessively drained soils throughout cismontane California. Interior live oaks are dominant or co-dominant in the tree canopy layer with other oak species, California buckeye, madrone (*Arbutus menziesii*), and/or foothill pine. Canopy cover is intermittent or savanna-like (CNPS 2019b). Within the Phase 2/Open Space Study Area, interior live oak woodland was observed in a variety of topographic positions, both on and off of serpentine. In most cases, interior live oak woodland canopy was dense, characterized by pure interior live oak, with occasional co- or subdominance by blue oak or foothill pine. In dense canopy, the understory that was often open and sparse occasionally dense with shrubs as poison oak. Interior live oak woodland was sometimes characterized by a more open canopy, and in such situations, the understory was characterized either by dense shrubs such as chamise and common manzanita or by dense non-native annual grasses. Although it is not considered a sensitive alliance by the CDFW, interior live oak woodland is protected by the County of Lake.

#### Sensitive Shrub-Dominated Communities

**Musk brush chaparral (*Ceanothus jepsonii* Shrubland Alliance); No Rank.** While not described as its own alliance in the literature, musk brush (*Ceanothus jepsonii*) was observed as the dominant plant in chaparral communities on serpentine soils in several portions of the Phase 2/Open Space Study Area. The tree layer was sparse to absent and composed of foothill pine and interior live oak. The shrub layer was typically dense and dominated by musk brush, with leather oak, whiteleaf manzanita, and chamise as sub-dominants. The herbaceous layer is sparse to dense and composed of species such as small fescue, Napa cryptantha, and woolly sunflower, and woolly malacothrix (*Malacothrix floccifera*). This community is best described under Holland's mixed serpentine chaparral. Although CDFW does not recognize this community as its own alliance, it does recognize a leather oak – musk brush provisional association, which is sensitive (CDFW 2018a); therefore, this community is treated as sensitive.

**Brewer willow thickets (*Salix breweri* Shrubland Alliance); Rank G2S2.** Brewer willow thickets typically occur along creek bottoms and stream terraces, typically on serpentine-derived alluvium. This community occurs throughout the North Coast Range as well as the northern, interior portion of the South Coast Range. Brewer willow is the dominant species, with other shrubs such as coffeeberry (*Frangula californica*), spice bush (*Calycanthus occidentalis*), and western azalea (*Rhododendron occidentale*) as co-dominants (CNPS 2019b). Within the Phase 2/Open Space Study Area, Brewer willow thickets were primarily observed along McCain and Butts creeks. Stands were typically dense, dominated by Brewer willow, with other shrubs such as western azalea present at low cover. Where the community occurs along low-gradient streams, it generally qualified as scrub-shrub wetlands. Where the community occurs along



relatively high-gradient streams, it generally did not qualify as scrub-shrub wetlands, but was considered riparian vegetation.

### Sensitive Herb-Dominated Communities

**Purple needle grass grasslands.** Purple needle grass grasslands occurs in valley and foothill areas on all topographic locations. The community occurs throughout cismontane California. Purple needle grass grassland is part of the needle grass – melic grass grassland alliance (*Nassella* spp. – *Melica* spp. Herbaceous Alliance). Although this alliance is listed as apparently secure at the global (G4) and state (S4) levels by the CDFW, the purple needlegrass association within the alliance is considered sensitive (CDFW 2018a). Within the Phase 2/Open Space Study Area, purple needle grass grassland was observed in a limited number of locations set within larger expanses of non-native annual grassland. Following CNPS 2019b, stands of purple needle grass were mapped where purple needlegrass was characteristic, typically a minimum of 10 percent absolute cover. In most cases, non-native annual grasses comprised the highest cover. Although the broader needle grass – melic grass grassland alliance is not considered sensitive, the purple needle grass grassland association is considered sensitive by the CDFW. In addition, native grasslands are generally protected under CEQA.

### Sensitive Aquatic Communities

A desktop wetland assessment was conducted within the Phase 2/Open Space Study Area in 2019 to document areas that are potentially subject to jurisdiction by the Corps, RWQCB, and/or CDFW. A formal wetland delineation was not conducted within the Phase 2/Open Space Study Area and the regulated extent of potential wetlands is approximate only.

**Emergent Wetlands; No Rank.** A variety of wetland habitats were observed within the Phase 2/Open Space Study Area, including forested wetlands, scrub-shrub wetlands, perennial marshes, and seasonal wetlands. Forested and scrub-shrub wetlands are dominated by white alder groves along Butcherknife Creek and Brewer willow thickets along Butts Creek; these communities are described above in the sensitive tree and shrub sub-sections, respectively. Emergent wetlands included perennial marshes and seasonal wetlands, described below.

Perennial marshes occur at the edges of larger ponds and reservoirs and may occupy the entirety of more shallow features. These habitats are dominated by a range of perennial vegetation alliances including:

- Pale spike rush marsh (*Eleocharis macrostachya* Herbaceous Alliance); Rank G4S4
- Hardstem bulrush marsh (*Schoenoplectus acutus* Herbaceous Alliance); Rank G5S4
- Cattail marsh (*Typha latifolia* Herbaceous Alliance); Rank G5S5

Seasonal wetlands are biotic communities in which the water table is near the surface for a portion of the year long enough to support hydrophytic vegetation, but dries out during some portion of the normal growing season. Within the Phase 2/Open Space Study Area, several seasonal wetland types were observed which are best described by their different vegetation alliances:

- Bent grass-tall fescue meadows (*Agrostis gigantea*, *A. stolonifera*-*Festuca arundinacea* Herbaceous Semi-Natural Alliance); No Rank

- Fremont's goldfields – downingia vernal pools (*Lasthenia fremontii* – *Downingia [bicornuta]* Herbaceous Alliance; Rank G2S2
- California button celery patches (*Eryngium aristulatum* Herbaceous Alliance); Rank G3S3
- Common monkeyflower seeps (*Mimulus [guttatus]* Herbaceous Alliance); Rank G4?S3?
- Meadow barley patches (*Hordeum brachyantherum* Herbaceous Alliance); Rank G4S3
- Mediterranean barley patches (*Hordeum marinum* Herbaceous Semi-Natural Alliance; undescribed); No Rank
- White-tip clover swales (*Trifolium variegatum* Herbaceous Alliance); Rank G3S3
- Rabbit's foot grass swales (*Polypogon monspeliensis* Herbaceous Semi-Natural Alliance; undescribed); No Rank

Although the wetland habitats observed within the Phase 2/Open Space Study Area contain a mix of sensitive and non-sensitive vegetation alliances, all wetland habitats are considered sensitive under CEQA and are protected under other federal and state laws.

**Ponds and Reservoirs; No Rank.** The Phase 2/Open Space Study Area contains a number of ponds and reservoirs, ranging from small depressions that pond water during only a portion of the growing season to larger features that hold water year round. Many of these features were historically created by damming natural drainage courses to support ranching and agricultural activities. These features provide a resource for wildlife species; however, because they offer a source of perennial water, they support a number of non-native aquatic wildlife species that may limit the potential for other native aquatic species including American bullfrog (*Lithobates catesbeianus*) and a number of non-native fishes. Ponds and reservoirs, despite their origin, are generally considered sensitive under CEQA and are protected under other federal and state laws as aquatic habitats.

**Streams; No Rank.** The Phase 2/Open Space Study Area contains a number of ephemeral, intermittent, and perennial streams. Ephemeral streams are linear features within which water flows only during or immediately after a significant rain event. These streams are dry for the majority of the year. Intermittent streams are linear features within which water flows for a portion of the year, generally drying out during the driest time of the year. Perennial streams are linear features within which water flows the entire year, even during the dry season. For the purposes of this report, streams 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.

Larger streams within the Phase 2/Open Space Study Area include Putah Creek, Bucksnot Creek, Butts Creek, and Butcherknife Creek. These streams are intermittent to perennial and generally have a well-developed riparian corridor dominated by valley oak, white alder, and red, arroyo, and Brewer willows. Where these streams occur near old barns and homesteads, northern California black walnut (*Juglans hindsii*) is also present. These well-developed riparian corridors provide a valuable resource for wildlife species. The extent of riparian vegetation within the Phase 2/Open Space Study Area is shown in Appendix B. Streams and their riparian corridors may be considered sensitive under CEQA and are protected by other federal and state laws.

## 5.2 Special-Status Plant Species

WRA botanists identified a total of 660 vascular plant taxa within the Guenoc Ranch property, including 500 native taxa and 160 non-native taxa. Of the 160 non-native species observed at the site, 60 are listed as invasive by the Cal-IPC (2019). A list of all plant species observed within the Guenoc Ranch property is provided as Appendix C.

Based upon a review of the resources and databases listed in Section 4.0, it was determined that 131 special-status plant species have been documented from one or more of the 7.5-minute quadrangles in the vicinity of the Phase 2/Open Space Study Area (see Section 4.0); Figure 4 shows the subset of those species that occur within 5 miles of the larger Guenoc Ranch. Appendix D lists all special-status species documented from the referenced quadrangles and provides a summary of their preferred habitats and their potential for occurring within the Phase 2/Open Space Study Area based on the types and condition of habitats found there. The Phase 2/Open Space Study Area does not contain designated Critical Habitat for any plant species.

During the site assessment and reconnaissance-level surveys, 27 special-status plant species were observed in the Phase 2/Open Space Study Area, and it was determined that the Phase 2/Open Space Study Area has moderate or high potential to support an additional 80 special-status plant species. The large area of serpentine and volcanic substrates, combined with recent fires and the generally undisturbed state of habitats, within the Phase 2/Open Space Study Area provides moderate to high potential for a large number of special-status plant species to occur.

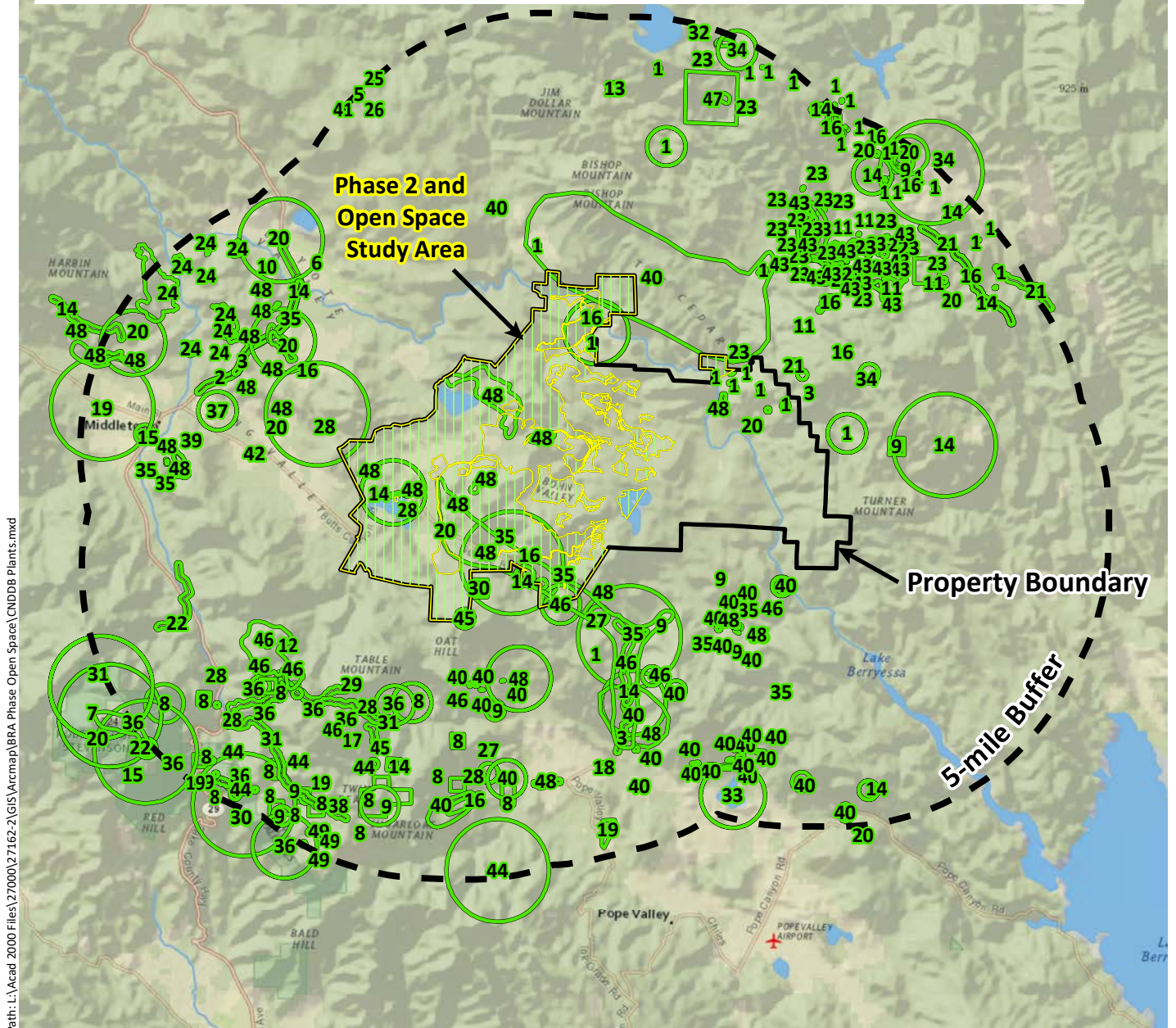
The remaining 24 species were determined to have little to no potential to occur within the Phase 2/Open Space Study Area based on one or more of the following factors:

- The species is unique to a small, well-defined geographic range (i.e., a very limited range of endemism) and has never been observed in the vicinity of the Phase 2/Open Space Study Area;
- Specific hydrologic characteristics, such as perennial saline conditions, are absent from the Phase 2/Open Space Study Area;
- Unique pH characteristics, such as alkali scalds or acidic soils, are absent from the Phase 2/Open Space Study Area;
- Suitable habitat is not present such as redwood forest or other dense coniferous forest, coastal habitats, alpine habitats, etc.

Special-status plant species observed within the Phase 2/Open Space Study Area are listed in Table 5, and their locations and extents are shown in Appendix E. Special-status plant species observed in the Phase 2/Open Space Study Area are described below. Additional special-status plant species determined to have moderate to high potential to occur within the Phase 2/Open Space Study Area are listed in Table 6, and their preferred habitats are listed in Appendix D.

#### CNDDDB Special-Status Plant Records

- |                             |                                        |                              |                                      |                              |                                 |
|-----------------------------|----------------------------------------|------------------------------|--------------------------------------|------------------------------|---------------------------------|
| 1. Adobe-lily               | 9. Colusa layia                        | 17. Holly-leaved ceanothus   | 25. Legenere                         | 33. Pappose tarplant         | 41. Slender Orcutt grass        |
| 2. Baker's navarretia       | 10. Congested-headed hayfield tarplant | 18. Jepson's coyote-thistle  | 26. Many-flowered navarretia         | 34. Pink creamsacs           | 42. Small pincushion navarretia |
| 3. Bent-flowered fiddleneck | 11. Drymaria-like western flax         | 19. Jepson's leptosiphon     | 27. Marin County navarretia          | 35. Porter's navarretia      | 43. Snow Mountain buckwheat     |
| 4. Big-scale balsamroot     | 12. Early jewelflower                  | 20. Jepson's milk-vetch      | 28. Mt. Saint Helena morning-glory   | 36. Rincon Ridge ceanothus   | 44. Sonoma beardtongue          |
| 5. Boggs Lake hedge-hyssop  | 13. Freed's jewelflower                | 21. Keck's checkerbloom      | 29. Napa bluecurls                   | 37. Saline clover            | 45. Sonoma ceanothus            |
| 6. Burke's goldfields       | 14. Green jewelflower                  | 22. Konocti manzanita        | 30. Napa false indigo                | 38. Santa Lucia dwarf rush   | 46. Three Peaks jewelflower     |
| 7. Calistoga ceanothus      | 15. Greene's narrow-leaved daisy       | 23. Kruckeberg's jewelflower | 31. Narrow-anthered brodiaea         | 39. Serpentine cryptantha    | 47. Toren's grimmia             |
| 8. Cobb Mountain lupine     | 16. Hall's harmonia                    | 24. Lake County western flax | 32. Northern California black walnut | 40. Sharsmith's western flax | 48. Two-carpellate western flax |
|                             |                                        |                              |                                      |                              | 49. Woolly meadowfoam           |



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

**Figure 4. CNDDDB Special-Status Plant Records within 5 miles of the Guenoc Ranch**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California

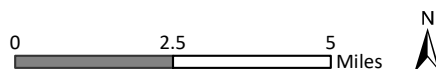


Table 5. Special-Status Plant Species Observed within the Phase 2/Open Space Study Area

| Scientific Name                                     | Common Name                     | Conservation Status | Acreage | Estimated Number of Individuals |
|-----------------------------------------------------|---------------------------------|---------------------|---------|---------------------------------|
| <b>Federal- and State-Listed</b>                    |                                 |                     |         |                                 |
| <i>Sidalcea keckii</i>                              | Keck's checkerbloom             | FE, Rank 1B.1       | <0.01   | 1                               |
| <i>Hesperolinon didymocarpum</i>                    | Lake County western flax        | SE, Rank 1B.2       | 1.36    | 3,884                           |
| <b>CNPS Rank 1</b>                                  |                                 |                     |         |                                 |
| <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i> | Konocti manzanita               | Rank 1B.3           | <0.01   | 14                              |
| <i>Brodiaea leptandra</i>                           | Narrow-anthered brodiaea        | Rank 1B.2           | 1.08    | 50                              |
| <i>Erigeron greenei</i>                             | Greene's narrow-leaved fleabane | Rank 1B.2           | 14.96   | 7,049                           |
| <i>Hesperolinon bicarpellatum</i>                   | Two-carpellate western flax     | Rank 1B.2           | 41.51   | 47,579                          |
| <i>Layia septentrionalis</i>                        | Colusa layia                    | Rank 1B.2           | 0.86    | 7,505                           |
| <i>Streptanthus hesperidis</i>                      | Green jewelflower               | Rank 1B.2           | 26.55   | 8,433                           |
| <i>Streptanthus morrisonii</i> <sup>11</sup>        | Morrison's jewelflower          | Rank 1B.2           | 3.19    | 449                             |
| <b>CNPS Rank 4</b>                                  |                                 |                     |         |                                 |
| <i>Antirrhinum virga</i>                            | Tall snapdragon                 | Rank 4.3            | <0.01   | 9                               |
| <i>Astragalus clevelandii</i>                       | Cleveland's milk-vetch          | Rank 4.3            | <0.01   | 25                              |
| <i>Calochortus uniflorus</i>                        | Pink star-tulip                 | Rank 4.2            | 0.71    | 150                             |
| <i>Calystegia collina</i> ssp. <i>oxyphylla</i>     | Mt. Saint Helena morning glory  | Rank 4.2            | 13.84   | 11,712                          |
| <i>Clarkia gracilis</i> ssp. <i>tracyi</i>          | Tracy's clarkia                 | Rank 4.2            | 0.93    | 875                             |
| <i>Collomia diversifolia</i>                        | Serpentine collomia             | Rank 4.3            | 11.11   | 3,501                           |
| <i>Cordylanthus tenuis</i> ssp. <i>brunneus</i>     | Serpentine bird's beak          | Rank 4.3            | <0.01   | 31                              |

<sup>11</sup> Individuals observed were intermediate between ssp. *elatus* and ssp. *hirtiflorus* and were therefore mapped at the specific level only.

| Scientific Name                                    | Common Name            | Conservation Status | Acreage | Estimated Number of Individuals |
|----------------------------------------------------|------------------------|---------------------|---------|---------------------------------|
| <i>Delphinium uliginosum</i>                       | Swamp larkspur         | Rank 4.2            | 1.71    | 2,576                           |
| <i>Erythranthe nudata</i>                          | Bare monkeyflower      | Rank 4.3            | 2.58    | 4,778                           |
| <i>Erythronium helenae</i>                         | St. Helena fawn lily   | Rank 4.2            | 1.97    | 2,700                           |
| <i>Fritillaria purdyi</i>                          | Purdy's fritillary     | Rank 4.3            | 0.93    | 185                             |
| <i>Helianthus exilis</i>                           | Serpentine sunflower   | Rank 4.2            | 8.18    | 11,135                          |
| <i>Monardella viridis</i>                          | Green monardella       | Rank 4.3            | 35.74   | 8,207                           |
| <i>Navarretia cotulifolia</i>                      | Cotula navarretia      | Rank 4.2            | 16.00   | 197,300                         |
| <i>Navarretia jepsonii</i>                         | Jepson's navarretia    | Rank 4.3            | 1.52    | 9,260                           |
| <i>Senecio clevelandii</i> var. <i>clevelandii</i> | Cleveland's ragwort    | Rank 4.3            | <0.01   | 100                             |
| <i>Toxicoscordion fontanum</i>                     | Marsh zigadenus        | Rank 4.2            | 1.05    | 392                             |
| <i>Triteleia lugens</i>                            | Dark-mouthed triteleia | Rank 4.3            | 0.54    | 102                             |

### 5.2.1 Special-Status Plant Species Observed within the Phase 2/Open Space Study Area

Special-status plant species observed within the Phase 2/Open Space Study Area are described below, grouped by conservation status and organized alphabetically by scientific name therein. Due to the limited nature of special-status plant surveys within the Phase 2/Open Space Study Area and the presence of large tracts of suitable habitat, it is presumed that these species are more widespread within the Phase 2/Open Space Study Area than described here and shown in Appendix E.

#### Federal-Listed Species

**Keck's checkerbloom (*Sidalcea keckii*); FE, Rank 1B.1.** Keck's checkerbloom is an annual herb in the mallow (Malvaceae) family that blooms from April through June. It typically occurs on exposed serpentine clays in cismontane woodland or non-native valley and foothill grassland habitats at elevations ranging from 250 to 2,200 feet (CNPS 2019a). This species has a serpentine affinity rank of "strong indicator" (3) (Safford et al. 2005). The nearest and most recently documented occurrence in the vicinity of the property is from May 2002 near Pocock Creek, approximately 1.5 miles to the east (CDFW 2019).

Within the Phase 2/Open Space Study Area, a single individual of Keck's checkerbloom was observed within a meadow on the south side of Butts Canyon Road. The species was also observed in other parts of the property, occurring on all aspects on serpentine clay substrates in annual grassland or in grassy openings within chaparral and blue oak woodland. Associated species included small fescue, California plantain (*Plantago erecta*), Cleveland's tarweed (*Hemizonia congesta* ssp. *clevelandii*), and soft chess.

#### State-Listed Species

**Lake County western flax (*Hesperolinon didymocarpum*); SE, Rank 1B.2.** Lake County western flax is an annual forb in the flax family (Linaceae) that blooms from May through July. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and valley and foothill grassland habitats at elevations ranging from 1,070 to 1,190 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of "strict endemic" (6.2) (Safford et al. 2005). The nearest documented occurrence in the vicinity of the property is from June 1994 near Middletown, approximately 5.5 miles west of the property (CDFW 2019). The most recent documented occurrence in the vicinity of the property is from May 2014 near Middletown, approximately 7.25 miles west of the Study Area (CDFW 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of Lake County western flax were observed in several locations. The species occurred in burned and unburned chaparral habitat on rocky, serpentine substrates. Associated species included small fescue, leather oak, yerba santa, woolly sunflower, common hareleaf (*Lagophylla ramosissima*), and common soaproot (*Chlorogalum pomeridianum* var. *pomeridianum*).

#### CNPS Rank 1 Species

**Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*); Rank 1B.3.** Konocti manzanita is an evergreen perennial shrub in the heath family (Ericaceae) that blooms from March to May, but is identifiable into summer months. It typically occurs on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest habitat at elevations ranging from 1,200 to 4,845 feet (CNPS 2019b). Known associated species include California black oak,



interior live oak, blue oak, chamise, Ponderosa pine (*Pinus ponderosa*), common manzanita, and hoary manzanita (*Arctostaphylos canescens*) (CDFW 2019a). The species does not have a serpentine affinity rank (Safford et al. 2005), suggesting it does not have a particular affinity for serpentine soils. The nearest documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from 1964 along Hildebrand Road, approximately 3.5 miles west of the Study Area (CDFW 2019a). The most recent documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from May 2018 near Hidden Valley Lake, approximately 4.5 miles northwest of the Study Area (Calflora 2019).

Within the Phase 2/Open Space Study Area, Konocti manzanita was observed at two locations in the southwestern portion of the Study Area, south of Detert Reservoir, on soils that are mapped as being derived from sandstone and shale (CSRL 2019). This species occurred in openings in blue oak woodland, with an understory dominated by non-native annual grasses.

**Narrow-anthered brodiaea (*Brodiaea leptandra*); Rank 1B.2.** Narrow-anthered brodiaea is a perennial herb in the brodiaea family (Themidaceae) that blooms from May to July. It typically occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest habitats at elevations ranging from 360 to 3,000 feet (CDFW 2019a, CNPS 2019a). Soil survey data from documented locations suggest this species is associated with gravelly loam and clay loam substrates derived from rhyolites, metavolcanics, and serpentine (CSRL 2019, CDFW 2019a). This species has a serpentine affinity rank of “weak indicator” (2.0) (Safford et al. 2005). The nearest documented occurrence in the vicinity of the Phase 1 Study Area is from 1999 along Kidd Canyon, approximately 4 miles southwest of the Study Area, although the location information is vague (CDFW 2019a). The most recent documented occurrence in the vicinity of the Phase 1 Study Area is from May 2013 at the north end of Las Posadas State Forest, approximately 10 miles south of the Study Area (CDFW 2019a).

Within the Phase 2/Open Space Study Area, approximately 50 individuals of narrow-anthered brodiaea were observed at a single location in the southwestern portion of the Study Area, south of Butts Canyon Road. It occurred on fine-textured, reddish soils in openings in chaparral in an area that burned in the 2015 Valley Fire. Associated species included chamise (*Adenostoma fasciculatum*), wavy-leaved ceanothus (*Ceanothus foliosus* var. *foliosus*), peak rush-rose (*Crocianthemum scoparium*), and small fescue.

**Greene’s narrow-leaved fleabane (*Erigeron greenei*); Rank 1B.2.** Greene’s narrow-leaved fleabane is a perennial forb in the sunflower family (Asteraceae) that blooms from May to September. It typically occurs on rocky substrate derived from volcanics or serpentine within shrubby vegetation in chaparral habitat at elevations ranging from 260 to 3,270 feet (CDFW 2019, CNPS 2019a). This species has a serpentine affinity rank of strict endemic (5.7) (Safford et al. 2005); however, this species has been documented from volcanic substrates as well. The nearest documented occurrence in the vicinity of the property is from August 1971 at the foot of Rabbit Hill, approximately 6.5 miles west of the property (CDFW 2019). The most recent documented occurrence in the vicinity of the property is from June 1996 between Soda Valley and Little Sugarloaf Peak, approximately 17.5 miles southeast of the property (CDFW 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of Greene’s narrow-leaved fleabane were observed in numerous locations. It occurred in rocky, sloped, burned and unburned chaparral habitat, usually on serpentine substrates. Associated species included leather oak, yerba santa, woolly sunflower, green monardella (*Monardella viridis*), and small fescue.



**Two-carpellate western flax (*Hesperolinon bicarpellatum*); Rank 1B.2.** Two-carpellate western flax is an annual forb in the flax family (Linaceae) that blooms from May through July. It typically occurs on serpentine substrates in chaparral habitat at elevations ranging from 195 to 3,270 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of strict endemic (6.2) (Safford et al. 2005). The nearest documented occurrence in the vicinity of the property is from June 2017 within the property, east of Bucksnot Creek (CDFW 2019). The most recent documented occurrence in the vicinity of the property is from May 2018 along the upper slope of Dead Horse Flat, approximately 3.25 miles west of the property (CDFW 2019).

Within the Phase 2/Open Space Study Area, tens of thousands of individuals of two-carpellate western flax were observed at numerous locations. It occurred in burned and unburned areas, most commonly on rocky volcanic or serpentine substrates in chaparral or Sargent cypress woodland habitats. Associated species include Sargent cypress, whiteleaf manzanita, green jewelflower (*Streptanthus hesperidis*), foothill pine, woolly sunflower, chamise, Sonoma lessingia (*Lessingia ramulosa*), and small fescue.

**Colusa layia (*Layia septentrionalis*); Rank 1B.2.** Colusa layia is an annual forb in the sunflower family (Asteraceae) that blooms from April through May. It typically occurs in openings and herbaceous areas underlain by serpentine substrates within chaparral, cismontane woodland, and valley and foothill grassland habitats at elevations ranging from 330 to 3,595 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of “strong indicator” (3.2) (Safford et al. 2005). The nearest documented occurrence in the vicinity of the property is from April 1980 in Routan Creek Canyon, approximately 1 mile south of the property (CDFW 2019). The most recent documented occurrence in the vicinity of the property is from May 2010 between Snell Valley and Spanish Valley, approximately 2.25 miles south of the property (CDFW 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of Colusa layia were observed at several locations. The species occurred within and occasionally at the edges of blue oak woodland on sloping to flat terrain. Associated species included blue oak, Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), blue dicks (*Dichelostemma capitatum*), and several species of non-native annual grasses.

**Green jewelflower (*Streptanthus hesperidis*); Rank 1B.2.** Green jewelflower is an annual forb in the mustard family (Brassicaceae) that blooms from May through July. It typically occurs in openings of brushy wooded areas underlain by serpentine substrates in chaparral and cismontane woodland habitat at elevations ranging from 420 to 2,470 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of “strict endemic” (6.1) (Safford et al. 2005). The nearest documented occurrence to the property is from June 1952 along Butts Canyon Road, near the southern boundary of the property (CDFW 2019). The most recent documented occurrence in the vicinity of the property is from June 2007 at the northern edge of Las Posadas State Forest, approximately 10.75 miles south of the property (CDFW 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of green jewelflower were observed at numerous locations. The species occurred in burned and unburned, often sparsely vegetated rocky areas in chaparral on serpentine substrates. Associated species included leather oak, whiteleaf manzanita, yerba santa, serpentine collomia (*Collomia diversifolia*), woolly sunflower, golden buckwheat, Napa cryptantha, and small fescue.

**Morrison's jewelflower (*Streptanthus morrisonii*); Rank 1B.2.** Morrison's jewel-flower is a perennial forb in the mustard family (Brassicaceae) that blooms from May through August, sometimes into September. It typically occurs on serpentine talus or rocky sites in chaparral habitat at elevations ranging from 585 to 1,920 feet (CDFW 2019a, CNPS 2019a). This species has a serpentine affinity rank of "strict endemic" (6.1) (Safford et al. 2005).

The taxonomy of this species is uncertain. The CNPS recognizes four subspecies (CNPS 2019a); however, the Jepson eFlora (Jepson Flora Project 2019) considers those subspecies as synonyms and does not recognize any infraspecific taxa (CDFW 2019a). Within the vicinity of the Phase 2/Open Space Study Area, two subspecies have been documented: Three Peaks jewelflower (*S. morrisonii* ssp. *elatus*) and Kruckeberg's jewelflower (*S. morrisonii* ssp. *kruckebergii*). The nearest and most recent documented occurrence of Three Peaks jewelflower from within the vicinity of the Phase 2/Open Space Study Area is from May 2009 along Butts Canyon at the Napa/Lake County line (CDFW 2019a). Kruckeberg's jewelflower has its nearest documented occurrence in the vicinity of the Phase 2/Open Space Study Area from July 1981 at the west side of Hunting Creek, approximately 0.25 mile north of the Study Area (CDFW 2019a). The most recent documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from April 2008 near the tributary of Zim Zim Creek, approximately 5 miles northeast of the Study Area (CDFW 2019a).

Within the Phase 2/Open Space Study Area, hundreds of individuals of Morrison's jewelflower were observed in a small number of locations south of Butts Canyon Road in the southwestern portion of the Study Area. The species occurred in serpentine barrens within chaparral habitat that burned in the 2015 Valley Fire. Associated species included Brewer's jewelflower (*S. breweri*), green jewelflower (*S. hesperidis*), leather oak (*Quercus durata*), serpentine collomia (*Collomia diversifolia*), two-carpellate western flax (*Hesperolinon bicarpellatum*), nude buckwheat (*Eriogonum nudum*), and woolly malacothrix (*Malacothrix floccosa*).

All CNDDDB and CCH records of *S. morrisonii* from the vicinity of the occurrences that WRA documented are identified as Three Peaks jewelflower, subspecies *elatus* (CDFW 2019a). However, the plants that WRA observed appeared morphologically intermediate between Three Peaks jewelflower and a subspecies that may also occur in the vicinity of the Phase 2/Open Space Study Area: Dorr's Cabin jewelflower (*S. morrisonii* ssp. *hirtiflorus*). Dolan and LaPré (1989) state that Dorr's Cabin jewelflower is only known from Sonoma County near Austin Creek, approximately 30 miles west of the Phase 2/Open Space Study Area. However, there is a collection by Ruygt from 1980 in the vicinity of Black Mountain, approximately 9 miles northeast of the Study Area. However, based on the location description for that occurrence (described as "off Devilshead Road, E of Hunting Creek"); WRA assumes that this occurrence is likely much closer to the Phase 2/Open Space Study Area, approximately 3 to 5 miles east to northeast (CCH 2019).

Three Peaks jewelflower should have "glabrous to slightly pubescent, greenish yellow to golden yellow" calyces, whereas Dorr's Cabin jewelflower should have "densely pubescent with long (2 mm) hairs, dark purple" calyces (Dolan and LaPré 1989). All individuals observed by WRA had greenish yellow to golden yellow calyces, which fits Three Peaks jewelflower; however, the vestiture of the calyces was, in the judgment of WRA biologists, denser than "slightly pubescent" but not "densely pubescent," and no hairs were 2 millimeters long. As such, all *S. morrisonii* individuals observed by WRA were assumed to be intermediate between Three Peaks jewelflower and Dorr's Cabin jewelflower and were only identified to the specific level for this report. That said, because both of the putative parent subspecies have a Rank of 1B.2, plants observed within

the Phase 2/Open Space Study Area are also considered to be Rank 1B.2 for the purposes of this report.

#### CNPS Rank 4 Species

**Tall snapdragon (*Antirrhinum virga*); Rank 4.3.** Tall snapdragon is a perennial forb in the plantain (Plantaginaceae) family that blooms from June through July. The species typically occurs in rock openings on serpentine soils within chaparral and lower montane coniferous forests at elevations ranging from 300 to 6,045 feet (CNPS 2019a). This species has a serpentine affinity rank of “strong indicator” (2.8) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from June 1983 near Twin Peaks Mine, approximately 2.25 miles southwest of the Study Area (CCH 2019). The most recent documented occurrence in the vicinity of the property is from June 2014 at Livermore Ranch, approximately 4.5 miles southwest of the Study Area (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately nine individuals of tall snapdragon were observed multiple locations. The species occurred in chaparral and foothill pine woodland habitats on rhyolitic and sandstone substrates in areas that burned in the 2015 Valley Fire. Associated species included foothill pine, leather oak, deer weed, chamise, and yerba santa.

**Cleveland’s milk-vetch (*Astragalus clevelandii*); Rank 4.3.** Cleveland’s milk-vetch is an annual forb in the pea family (Fabaceae) that blooms from June through September. It typically occurs on serpentine substrates, particularly in and around seeps and swales, within chaparral, cismontane woodland, and riparian forest habitats at elevations ranging from 650 to 4,875 feet (CNPS 2019a, CCH 2019). This species has a serpentine affinity rank of “strict endemic” (6.1) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from June 1945 along Butts Canyon Road. The most recent previously documented occurrence in the vicinity of the property is from June 2018 in Morgan Valley, approximately 6 miles northeast of the property (Calflora 2019).

Within the Phase 2/Open Space Study Area, approximately 25 individuals of Cleveland’s milk-vetch were observed at several locations in and along the edges of ephemeral to perennial streams, seeps, and wetlands on serpentine substrates. Associated species included Brewer’s willow, swamp larkspur (*Delphinium uliginosum*), marsh zigadenus (*Toxicoscordion fontanum*), and seep monkeyflower (*Erythranthe guttata*).

**Pink star-tulip (*Calochortus uniflorus*); Rank 4.2.** Pink star-tulip is a perennial bulbiferous forb in the lily family (Liliaceae) that blooms from April through June. The species typically occurs in coastal prairie, coastal scrub, meadows and seeps, and North Coast coniferous forest at elevations ranging from 33 to 3,510 feet (CNPS 2019a). This species has a serpentine affinity rank of “weak indicator” (1.7) (Safford et al. 2005). Known associated species include California oatgrass (*Danthonia californica*), western buttercup (*Ranunculus occidentalis*), cream sacs (*Castilleja rubicundula*), cream cups (*Platystemon californicus*), and smooth tidytops (*Layia chrysanthemoides*). The nearest and most recent previously documented occurrence in the vicinity of the property is from May 1999 in Snell Valley, approximately 2.5 miles east of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately 150 individuals of pink star-tulip were observed at several locations. The species was found on serpentine substrates in and around seasonal wetland seeps in open, herbaceous areas adjacent to chaparral habitat. Associated species include swamp larkspur, marsh zigadenus, bare monkeyflower (*Erythranthe nudata*), and Italian ryegrass.

**Mt. Saint Helena morning glory (*Calystegia collina* ssp. *oxyphylla*); Rank 4.2.** Mt. Saint Helena morning-glory is a perennial forb in the morning-glory family (Convolvulaceae) that blooms from April through June. The species typically occurs on slopes and hillsides in barrens or openings within chaparral habitat at elevations ranging from 815 to 3,315 feet (CNPS 2019a). This species has a serpentine affinity rank of “strict endemic” (5.6) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 1998 along Butts Canyon Road adjacent to the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is near Highway 29, approximately 5.5 miles southwest of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of Mt. Saint Helena morning glory were observed at numerous locations. The species occurs in chaparral and woodland habitats on rocky, typically serpentine substrates in burned and unburned areas. Associated species included leather oak, chamise, woolly sunflower, foothill pine, Sargent cypress, two-carpellate western flax, and small fescue.

**Tracy’s clarkia (*Clarkia gracilis* ssp. *tracyi*); Rank 4.2.** Tracy’s clarkia is an annual forb in the evening primrose family (Onagraceae) that blooms from April through July. The species typically occurs in openings and bare areas underlain by serpentine substrates within chaparral habitat at elevations ranging from 210 to 2,115 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of “broad endemic” (5.0) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from June 1980 along Butts Canyon Road, approximately 0.75 mile southeast of the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from May 2016 at the University of California McLaughlin Reserve, approximately 6 miles northeast of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, hundreds of individuals of Tracy’s clarkia were observed at several locations. The species occurred in chaparral and annual grassland habitats on serpentine substrates in areas that burned in the 2015 Valley Fire. Associated species included leather oak, small fescue, two-carpellate western flax, narrow tarplant (*Holocarpha virgata* ssp. *virgata*), and Coast Range mariposa lily (*Calochortus vestae*).

**Serpentine collomia (*Collomia diversifolia*); Rank 4.3.** Serpentine collomia is an annual forb in the phlox family (Polemoniaceae) that blooms from May through June. The species typically occurs on rocky or gravelly serpentine substrates within chaparral and cismontane woodland habitats at elevations ranging from 975 to 1,950 feet (CNPS 2019a). This species has a serpentine affinity rank of “strict endemic” (5.6) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 2015 along Butts Canyon Road, adjacent to the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from May 2017 along Hunting Creek, approximately 3 miles east of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of serpentine collomia were observed at numerous locations. The species occurred on rocky, serpentine substrates in chaparral and woodland habitats. Associated species included leather oak, woolly sunflower, Mt. Saint Helena morning-glory, small fescue, green jewelflower, and toyon.

**Serpentine bird’s beak (*Cordylanthus tenuis* ssp. *brunneus*); Rank 4.3.** Serpentine bird’s-beak is an annual hemiparasitic forb in the broomrape family (Orobanchaceae) that blooms from July through August. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and closed-cone coniferous forest habitats at elevations ranging from 1,540 to 2,975

feet (CNPS 2019a). This species has a serpentine affinity rank of “broad endemic” (5.1) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from September 1938 in Butts Canyon, within the Study Area (CCH 2019). The most recent previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from June 2016 along Knoxville-Devilhead Road, approximately 4.5 miles northeast of the Study Area (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately 30 individuals of serpentine bird’s beak were observed south of Butts Canyon Road. The species occurred on steep, rocky, serpentine substrates in leather oak chaparral and foothill pine woodland. Associated species included leather oak, foothill pine (*Pinus sabiniana*), yerba santa (*Eriodictyon californicum*), Greene’s narrow-leaved fleabane (*Erigeron greenei*), serpentine collomia, woolly sunflower (*Eriophyllum lanatum*), and small fescue (*Festuca microstachys*).

**Swamp larkspur (*Delphinium uliginosum*); Rank 4.2.** Swamp larkspur is a perennial herb in the buttercup (Ranunculaceae) family that blooms from May through June. The species typically occurs in serpentine seeps, chaparral openings, and valley and foothill grassland habitats at elevations ranging from 1,100 to 2,000 feet (CNPS 2019a). This species has a serpentine affinity rank of “strict endemic” (5.7) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 1952 along Butts Canyon Road, adjacent to the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from May 2010 along Butts Canyon Road, approximately 1.25 miles southeast of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of swamp larkspur were observed at numerous locations in and along the edges of ephemeral to perennial streams, seeps, and wetlands on serpentine substrates. Associated species included Cleveland’s milk-vetch, marsh zigadenus, seep monkeyflower, and Italian ryegrass.

**Bare monkeyflower (*Erythranthe nudata*); Rank 4.3.** Bare monkeyflower is an annual herb in the lopseed family (Phrymaceae) that blooms from May through June. The species typically occurs in seeps and other wet spots in chaparral and cismontane woodland habitats on serpentine substrates at elevations ranging from 655 feet to 2,300 feet (CNPS 2019a). This species has a serpentine affinity rank of “strict endemic” (5.6) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 2015 along Butts Canyon Road, adjacent to the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is also from May 2015 along Butts Canyon Road, but is approximately 1.25 miles southeast of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of bare monkeyflower were observed at numerous locations. The species occurred in and along the edges of ephemeral to perennial streams, seeps, and wetlands, as well as occasionally in mesic, non-wetland areas, but always on serpentine substrates. Associated species included foothill pine, seep monkeyflower, leather oak, woolly sunflower, and swamp larkspur.

**St. Helena fawn lily (*Erythronium helenae*); Rank 4.2.** St. Helena fawn lily is a perennial bulbiferous herb in the lily (Liliaceae) family that blooms from March to May. The species typically occurs on volcanic or serpentine soils in chaparral, cismontane woodland, valley and foothill grassland, and lower montane coniferous forest habitats at elevations ranging from 1,050 to 1,660 feet (CNPS 2019a). This species has a serpentine affinity rank of “broad endemic” (4.5) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from

March 1963 along Butts Canyon Road (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from April 2016 along Livermore Road, near Highway 29, approximately 5.25 miles southwest of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of St. Helena fawn lily were observed at several locations. The species occurred in burned and unburned areas on moderately steep, north-facing, rocky slopes in leather oak chaparral habitat on serpentine substrates. Associated species included green monardella, toyon, Greene's narrow-leaved fleabane, coffeeberry, and whiteleaf manzanita.

**Purdy's fritillary (*Fritillaria purdyi*); Rank 4.3.** Purdy's fritillary is a low-growing, bulbiferous perennial forb in the lily family (Liliaceae) that blooms from March through June. The species typically occurs on dry ridges underlain by serpentine substrate in chaparral, cismontane woodland, and lower montane coniferous forest habitats at elevations ranging from 565 to 7,330 feet (CNPS 2019a, Jepson eFlora 2019). This species has a serpentine affinity rank of "broad endemic" (4.3) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from March 1982 along Butts Canyon Road, approximately 1.25 miles southeast of the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from April 2005 at the McLaughlin Reserve, approximately 6 miles northeast of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately 185 individuals of Purdy's fritillary were observed at several locations. The species occurred on rocky, serpentine substrates in chaparral and woodland habitats in areas that burned in the 2015 Valley Fire. Associated species included leather oak, whiteleaf manzanita, foothill pine, green jewelflower, serpentine collomia, Napa cryptantha, and small fescue.

**Serpentine sunflower (*Helianthus exilis*); Rank 4.2.** Serpentine sunflower is an annual forb in the sunflower family that blooms from June through November. The species typically occurs in in seeps and other wet areas in chaparral and cismontane woodland on serpentine soils (CNPS 2019a). This species has a serpentine affinity rank of "strict endemic" (5.7) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from October 1994 along Butts Canyon Road, approximately 3 miles southeast of the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from July 2005 at the McLaughlin Reserve, approximately 5 miles to the northeast.

Within the Phase 2/Open Space Study Area, thousands of individuals of serpentine sunflower were observed at numerous locations. The species occurred in and adjacent to wetlands, seeps, and streams on serpentine substrates. Associated species included Brewer's willow, swamp larkspur, Cleveland's ragwort (*Senecio clevelandii* var. *clevelandii*), white hedgenettle (*Stachys albens*), and leather oak.

**Green monardella (*Monardella viridis*); Rank 4.3.** Green monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. The species typically occurs in chaparral, cismontane woodland, and broadleaf upland forest habitats on serpentine substrates at elevations ranging from 325 to 3,285 feet (CNPS 2019a). This species has a serpentine affinity rank of "broad endemic/strict indicator" (4.3) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 2015 along Butts Canyon Road, adjacent to the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from June 2015 on Snell Peak (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of green monardella were observed at numerous locations. The species occurred in burned and unburned chaparral on serpentine and volcanic substrates. Associated species included woolly sunflower, leather oak, toyon, Mt. Saint Helena morning-glory, and small fescue.

**Cotula navarretia (*Navarretia cotulifolia*); Rank 4.2.** *Cotula navarretia* is an annual forb in the phlox family (Polemoniaceae) that blooms from May through June. The species typically occurs on vernal wet areas underlain by adobe clay in chaparral, cismontane woodland, and valley and foothill grassland habitats at elevations ranging from 10 to 6,005 feet (CNPS 2019a, Jepson Flora Project 2019). The species does not have a serpentine affinity rank (Safford et al. 2005), suggesting it does not have a particular affinity for serpentine soils. The nearest previously documented occurrence in the vicinity of the property is from April 1935 near Aetna Springs, approximately 1.5 miles south of the property (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from May 1982 along Pope Canyon Rd, approximately 7 miles southeast of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, hundreds of thousands of individuals of *cotula navarretia* were observed across multiple locations. The species occurred on heavy, serpentine clay soils in mesic grassland. Associated species included slim oat (*Avena barbata*), Italian ryegrass, small fescue, and Douglas' microseris (*Microseris douglasii* ssp. *douglasii*).

**Jepson's navarretia (*Navarretia jepsonii*); Rank 4.3.** Jepson's *navarretia* is an annual herb in the phlox (Polemoniaceae) family that blooms from April through June. The species typically occurs in transitional zones between cismontane woodland, chaparral, and valley and foothill annual grassland habitats on clay soils (often serpentine) at elevations ranging from 550 to 2,800 feet (CNPS 2019a). This species has a serpentine affinity rank of "strict endemic" (5.6) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the property is from May 1946 near Detert Reservoir (CCH 2019). The most recent previously documented occurrence in the vicinity of the property is from May 2015 in the Missimer – Snell Valley Preserve, approximately 2.75 miles east of the property (CCH 2019).

Within the Phase 2/Open Space Study Area, thousands of individuals of Jepson's *navarretia* were observed across numerous locations. The species occurred on heavy, sometimes rocky, serpentine or mixed serpentine/volcanic clay soils in grassland habitat or in grassy openings in chaparral and foothill pine woodland. Associated species included Cleveland's tarplant, small fescue, common soaproot, and trefoil.

**Cleveland's ragwort (*Senecio clevelandii* var. *clevelandii*); Rank 4.3.** Cleveland's ragwort is a perennial forb in the sunflower family (Asteraceae) that blooms from June through July. The species typically occurs in chaparral habitats on serpentine substrates at elevations ranging from 1,185 to 2,925 feet (CNPS 2018a, CDFW 2018a). This species has a serpentine affinity rank of "strict endemic" (5.8) (Safford et al. 2005). The nearest previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from June 1968 along Butts Canyon Road, within the Study Area (CCH 2019). The most recent previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from June 2010 in the Cache Creek Wilderness, approximately 9.5 miles north of the Study Area (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately 100 individuals of Cleveland's ragwort were observed south of Butts Canyon Road. The species occurred on intermittent to perennial streams and in wetland meadows on serpentine substrates in areas that burned in the 2015 Valley Fire. Associated species included swamp larkspur, serpentine sunflower (*Helianthus exilis*),

meadow barley (*Hordeum brachyantherum*), marsh zigadenus (*Toxicoscordion fontanum*), marsh triteleia (*Triteleia peduncularis*), and little paintbrush (*Castilleja minor*).

**Marsh zigadenus (*Toxicoscordion fontanum*); Rank 4.2.** Marsh zigadenus is a bulbiferous perennial forb in the false-helleborine family (Melanthiaceae) that blooms from April to July. The species typically occurs in vernal mesic areas underlain by clay soils derived from serpentine in chaparral, cismontane woodland, lower montane coniferous forest, meadow and seep, and marsh and swamp habitats at elevations ranging from 45 to 3,250 feet (CNPS 2019a, CDFW 2019). This species has a serpentine affinity rank of “broad endemic/strong indicator” (3.8) (Safford et al. 2005). The nearest and most recent previously documented occurrence in the vicinity of the property is from May 2010 along Butts Canyon Road (CCH 2019).

Within the Phase 2/Open Space Study Area, hundreds of individuals of marsh zigadenus were observed at numerous locations. The species occurred in and along the edges of ephemeral to perennial streams, seeps, and wetlands on serpentine substrates. Associated species included seep monkeyflower, Italian ryegrass, swamp larkspur, and iris-leaved rush (*Juncus xiphioides*).

**Dark-mouthed triteleia (*Triteleia lugens*); Rank 4.3.** Dark-mouthed triteleia is a perennial bulbiferous forb in the brodiaea family (Themidaceae) that blooms from April through June. The species typically occurs in chaparral, coastal scrub, broadleaf upland forest, and lower montane coniferous forest habitats at elevations ranging from 325 to 3,250 feet (CNPS 2018a). The species does not have a serpentine affinity rank (Safford et al. 2005), suggesting it does not have a particular affinity for serpentine soils. The nearest previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from June 1933, approximately 3.5 miles southwest of the Study Area (CCH 2019). The most recent previously documented occurrence in the vicinity of the Phase 2/Open Space Study Area is from May 1999 at Livermore Ranch, approximately 4.5 miles southwest of the Study Area (CCH 2019).

Within the Phase 2/Open Space Study Area, approximately 100 individuals of dark-mouthed triteleia were observed south of Butts Canyon Road in burned chaparral on rocky volcanic substrates. Associated species included leather oak, coffeeberry (*Frangula californica*), toyon (*Heteromeles arbutifolia*), small fescue, and Sargent cypress (*Hesperocyparis sargentii*).

#### 5.2.2 Special-Status Plant Species with Potential to Occur

In addition to those special-status plant species that were observed within the Phase 2/Open Space Study Area, the 80 special-status plant species listed in Table 6 were determined to have at least a moderate potential to occur based on the types and condition of habitats found there. These species were not observed during reconnaissance-level surveys for special-status plants; however, their presence cannot be ruled out as suitable habitat is present and the species may be present in low numbers or may have been historically present and remain onsite in a dormant condition waiting for favorable climatic conditions. For example, many species may be present in the seed bank, but may only germinate following fire or during periods of substantial rainfall. The preferred habitat and blooming period for each of these species is described in Appendix D.



Table 6. Special-Status Plant Species with Moderate Potential to Occur within the Phase 2/Open Space Study Area

| Scientific Name                                       | Common Name                     | Conservation Status |
|-------------------------------------------------------|---------------------------------|---------------------|
| <i>Allium fimbriatum</i> var. <i>purdyi</i>           | Purdy's onion                   | Rank 4.3            |
| <i>Amorpha californica</i> var. <i>napensis</i>       | Napa false indigo               | Rank 1B.2           |
| <i>Amsinckia lunaris</i>                              | Bent-flowered fiddleneck        | Rank 1B.2           |
| <i>Antirrhinum subcordatum</i>                        | Dimorphic snapdragon            | Rank 4.3            |
| <i>Arabis modesta</i>                                 | Modest rockcress                | Rank 4.3            |
| <i>Arabis oregana</i>                                 | Oregon rockcress                | Rank 4.3            |
| <i>Asclepias solanoana</i>                            | Serpentine milkweed             | Rank 4.2            |
| <i>Astragalus breweri</i>                             | Brewer's milk-vetch             | Rank 4.2            |
| <i>Astragalus claranus</i>                            | Clara Hunt's milk-vetch         | FE, ST<br>Rank 1B.3 |
| <i>Astragalus rattanii</i> var. <i>jepsonianus</i>    | Jepson's milk-vetch             | Rank 1B.2           |
| <i>Balsamorhiza macrolepis</i>                        | Big-scale balsamroot            | Rank 1B.2           |
| <i>Brasenia schreberi</i>                             | Watershield                     | Rank 2B.3           |
| <i>Calamagrostis ophitidis</i>                        | Serpentine reed grass           | Rank 4.3            |
| <i>Calyptridium quadripetalum</i>                     | Four-petaled pussypaws          | Rank 4.3            |
| <i>Calystegia collina</i> ssp. <i>venusta</i>         | South coast range morning-glory | Rank 4.3            |
| <i>Castilleja rubicundula</i> var. <i>rubicundula</i> | Pink cream sacs                 | Rank 1B.2           |
| <i>Ceanothus confusus</i>                             | Rincon Ridge ceanothus          | Rank 1B.1           |
| <i>Ceanothus divergens</i>                            | Calistoga ceanothus             | Rank 1B.2           |
| <i>Ceanothus purpureus</i>                            | Holly-leaved ceanothus          | Rank 1B.2           |
| <i>Ceanothus sonomensis</i>                           | Sonoma ceanothus                | Rank 1B.2           |
| <i>Chlorogalum pomeridianum</i> var. <i>minus</i>     | Dwarf soaproot                  | Rank 1B.2           |
| <i>Clarkia breweri</i>                                | Brewer's clarkia                | Rank 4.2            |
| <i>Cryptantha dissita</i>                             | Serpentine cryptantha           | Rank 1B.2           |
| <i>Cryptantha excavata</i>                            | Deep-scarred cryptantha         | Rank 1B.1           |
| <i>Cryptantha rostellata</i>                          | Red-stemmed cryptantha          | Rank 4.2            |
| <i>Downingia willamettensis</i>                       | Cascade downingia               | Rank 2B.2           |
| <i>Eriastrum brandegeae</i>                           | Brandegee's eriastrum           | Rank 1B.1           |
| <i>Erigeron biolettii</i>                             | Streamside daisy                | Rank 3              |
| <i>Eriogonum nervulosum</i>                           | Snow Mountain buckwheat         | Rank 1B.2           |
| <i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>    | Bay buckwheat                   | Rank 4.2            |
| <i>Eryngium constancei</i>                            | Loch Lomond button celery       | FE, SE<br>Rank 1B.1 |

| Scientific Name                                           | Common Name                        | Conservation Status |
|-----------------------------------------------------------|------------------------------------|---------------------|
| <i>Eryngium jepsonii</i>                                  | Jepson's coyote thistle            | Rank 1B.2           |
| <i>Fritillaria pluriflora</i>                             | Adobe lily                         | Rank 1B.2           |
| <i>Gratiola heterosepala</i>                              | Boggs Lake hedge hyssop            | SE, Rank 1B.2       |
| <i>Harmonia hallii</i>                                    | Hall's harmonia                    | Rank 1B.2           |
| <i>Harmonia nutans</i>                                    | Nodding harmonia                   | Rank 4.3            |
| <i>Hemizonia congesta</i> ssp. <i>congesta</i>            | Congested-headed hayfield tarplant | Rank 1B.2           |
| <i>Hesperolinon adenophyllum</i>                          | Glandular western flax             | Rank 1B.2           |
| <i>Hesperolinon drymarioides</i>                          | Drymaria-like western flax         | Rank 1B.2           |
| <i>Hesperolinon sharsmithiae</i>                          | Sharsmith's western flax           | Rank 1B.2           |
| <i>Horkelia bolanderi</i>                                 | Bolander's horkelia                | Rank 1B.2           |
| <i>Juncus luciensis</i>                                   | Santa Lucia dwarf rush             | Rank 1B.2           |
| <i>Lasthenia burkei</i>                                   | Burke's goldfields                 | FE, SE<br>Rank 1B.1 |
| <i>Legenere limosa</i>                                    | Legenere                           | Rank 1B.1           |
| <i>Leptosiphon acicularis</i>                             | Bristly leptosiphon                | Rank 4.2            |
| <i>Leptosiphon jepsonii</i>                               | Jepson's leptosiphon               | Rank 1B.2           |
| <i>Leptosiphon latisectus</i>                             | Broad-lobed leptosiphon            | Rank 4.3            |
| <i>Lessingia hololeuca</i>                                | Woolly-headed lessingia            | Rank 3              |
| <i>Lilium rubescens</i>                                   | Redwood lily                       | Rank 4.2            |
| <i>Limnanthes floccosa</i> ssp. <i>floccosa</i>           | Woolly meadowfoam                  | Rank 4.2            |
| <i>Limnanthes vinculans</i>                               | Sebastopol meadowfoam              | FE, SE<br>Rank 1B.1 |
| <i>Lomatium hooveri</i>                                   | Hoover's lomatium                  | Rank 4.3            |
| <i>Lomatium repostum</i>                                  | Napa lomatium                      | Rank 4.3            |
| <i>Lupinus sericatus</i>                                  | Cobb Mountain lupine               | Rank 1B.2           |
| <i>Malacothamnus helleri</i>                              | Heller's bush-mallow               | Rank 3.3            |
| <i>Micropus amphibolus</i>                                | Mt.Diablo cottonweed               | Rank 3.2            |
| <i>Microseris paludosa</i>                                | Marsh microseris                   | Rank 1B.2           |
| <i>Microseris sylvatica</i>                               | Sylvan microseris                  | Rank 4.2            |
| <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>         | Baker's navarretia                 | Rank 1B.1           |
| <i>Navarretia myersii</i> ssp. <i>deminuta</i>            | Small pincushion navarretia        | Rank 1B.2           |
| <i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i> | Adobe navarretia                   | Rank 4.2            |
| <i>Navarretia paradoxinota</i>                            | Porter's navarretia                | Rank 1B.3           |
| <i>Navarretia rosulata</i>                                | Marin County navarretia            | Rank 1B.2           |

| Scientific Name                                       | Common Name               | Conservation Status |
|-------------------------------------------------------|---------------------------|---------------------|
| <i>Orcuttia tenuis</i>                                | Slender Orcutt grass      | FT, SE, Rank 1B.1   |
| <i>Orobanche valida</i> ssp. <i>howellii</i>          | Howell's broomrape        | Rank 4.3            |
| <i>Penstemon newberryi</i> var. <i>sonomensis</i>     | Sonoma beardtongue        | Rank 1B.3           |
| <i>Plagiobothrys hystriculus</i>                      | Bearded popcornflower     | Rank 1B.1           |
| <i>Potamogeton zosteriformis</i>                      | Eel-grass pondweed        | Rank 2B.2           |
| <i>Ranunculus lobbii</i>                              | Lobb's aquatic buttercup  | Rank 4.2            |
| <i>Sedella leiocarpa</i>                              | Lake County stonecrop     | FE, SE<br>Rank 1B.1 |
| <i>Sidalcea hickmanii</i> ssp. <i>napensis</i>        | Napa checkerbloom         | Rank 1B.1           |
| <i>Sidalcea oregana</i> ssp. <i>hydrophila</i>        | Marsh checkerbloom        | Rank 1B.2           |
| <i>Streptanthus brachiatus</i> ssp. <i>brachiatus</i> | Socrates Mine jewelflower | Rank 1B.2           |
| <i>Streptanthus brachiatus</i> ssp. <i>hoffmanii</i>  | Freed's jewelflower       | Rank 1B.2           |
| <i>Streptanthus morrisonii</i> ssp. <i>elatus</i>     | Three Peaks jewelflower   | Rank 1B.2           |
| <i>Streptanthus vernalis</i>                          | Early jewelflower         | Rank 1B.2           |
| <i>Stuckenia filiformis</i> ssp. <i>alpina</i>        | Slender-leaved pondweed   | Rank 2B.2           |
| <i>Thelypodium brachycarpum</i>                       | Short-podded Thelypodium  | Rank 4.2            |
| <i>Trichostema ruygtii</i>                            | Napa bluecurls            | Rank 1B.2           |
| <i>Viburnum ellipticum</i>                            | Oval-leaved viburnum      | Rank 2B.3           |

### 5.3 Special-Status Wildlife Species

WRA wildlife biologists observed a total of 130 wildlife species within<sup>12</sup> the property, including 19 mammal species, 82 bird species, 12 reptile and amphibian species, 10 fish species, and seven invertebrate species. A list of all wildlife species observed is provided as Appendix F.

Based upon a review of the resources listed in Section 4.0, it was determined that 60 special-status wildlife species have been documented in one or more of the referenced 7.5-minute quadrangles in the vicinity of the Phase 2/Open Space Study Area (see Section 4.0). Figure 5 depicts the subset of those species that occur within 5 miles of the property. Appendix G summarizes the potential for each of these species to occur within the Phase 2/Open Space Study Area. Fourteen special-status wildlife species were observed within or adjacent to the Phase 2/Open Space Study Area, and an additional 21 special-status wildlife species were determined to have a moderate to high potential to occur within the Phase 2/Open Space Study Area. The Phase 2/Open Space Study Area does not contain designated Critical Habitat for any species.

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<sup>12</sup> All wildlife species observed within the property in 2018 and 2019 were documented and included in this list. Due to the ability of wildlife to move between suitable habitats within the property, specific locations were not noted unless the species was special-status or a raptor.

The remaining 25 species were determined to be unlikely or have no potential to occur in the Phase 2/Open Space Study Area for one or more of the following reasons:

- The Phase 2/Open Space Study Area is outside of the known or historical range of the species;
- The Phase 2/Open Space Study Area lacks specific habitat requirements (i.e. marsh, old growth conifers, etc.),
- Invasive or detrimental species, such as non-native fish and bullfrogs, are present and reduce habitat suitability; or,
- There are barriers to dispersal that make it unlikely for the species to occur on-site.

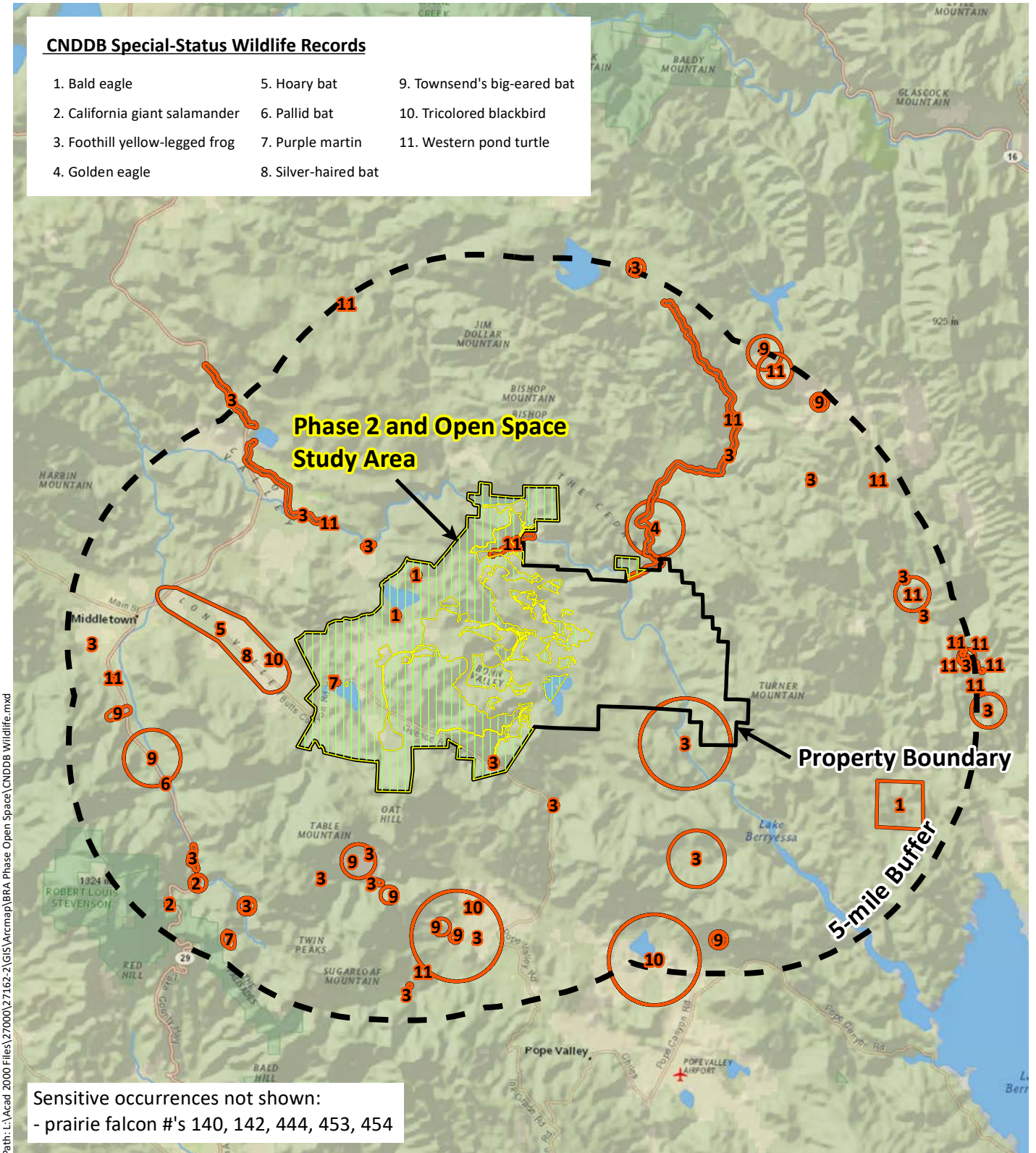
Table 7 lists the special-status wildlife species observed within or adjacent to the Phase 2/Open Space Study Area; Figure 6 shows their locations. Descriptions of these species, their preferred habitat, and their observed and potential distribution across the Phase 2/Open Space Study Area are provided below and summarized in Appendix G. Table 8 lists the special-status wildlife species determined to have moderate to high potential to occur within the Phase 2/Open Space Study Area. Descriptions of these species, their preferred habitat, and their potential for occurring within the Phase 2/Open Space Study Area are summarized in Appendix G.

Focused raptor surveys conducted in 2018 identified 14 raptor species and eight active raptor nests located within or adjacent to the Phase 2/Open Space Study Area. In 2019, an additional raptor species (Cooper's hawk) was observed. A total of 63 avian species were identified within the property. Detailed results of focused raptor surveys are provided in Appendix H of the Phase 1 BRA (WRA 2019).

Focused surveys for amphibians determined that FYLF is present within the property in association with Butts Creek. Additionally, surveys identified FYLF egg masses in Butts Creek, indicating that the species breeds there. Although FYLF has been documented as extant in the Phase 2/Open Space Study Area, the presence of numerous non-native predators including American bullfrog, non-native centrarchid fishes, and crayfish, may be limiting the distribution and overall success of FYLF within the Phase 2/Open Space Study Area.

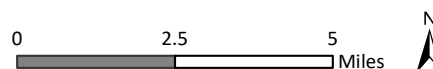
Focused surveys conducted for CRLF had negative results. All of the lentic and lotic habitats, at the time of the survey, were documented to be infested with invasive predators, including American bullfrog, largemouth and smallmouth bass, and bluegill and green sunfish. Additionally signal-band crayfish were also observed in several of the habitats. Red swamp crayfish were observed in at least one area. The presence and density of these invasive aquatic species was determined to preclude the presence of CRLF from inhabiting the surveyed aquatic habitats, and make it unlikely to occur within the Phase 2/Open Space Study Area.

In addition to the special-status wildlife species that may occur, non-status wildlife species occur and may use portions of the Phase 2/Open Space Study Area as a migration corridor. Large expanses of uncultivated land can be used by native species, such as mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and black bear (*Ursus americanus*), to move to various territories seasonally and throughout their life cycle. Within the Phase 2/Open Space Study Area, habitats including, but not limited to, open grassland valleys, oak woodlands, chaparral, and stream corridors may facilitate wildlife movement. Additionally, the many lakes, reservoirs, and ponds in and within close proximity to the Phase 2/Open Space Study Area are anticipated to attract native wildlife species. Therefore, portions of the Phase 2/Open Space

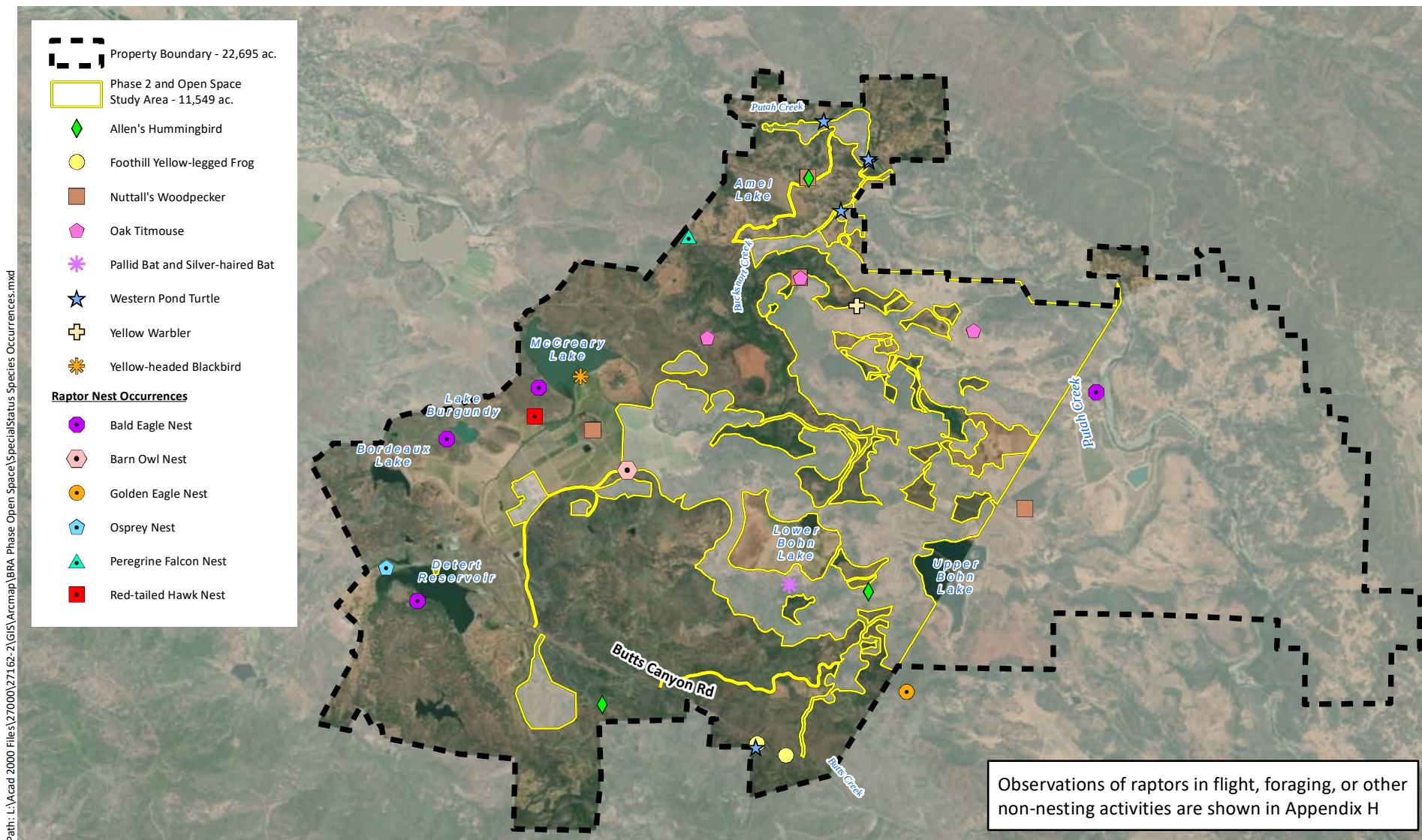


**Figure 5. CNDDDB Special-Status Wildlife Records within 5 miles of the Guenoc Ranch**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California







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

**Figure 6. Special-Status Wildlife Species Observed within the Guenoc Resort**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space  
Lake County, California

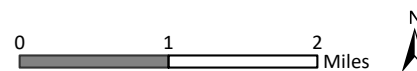


Table 7. Special-Status Wildlife Species Observed within or adjacent to the Phase 2/Open Space Study Area

| Scientific Name                      | Common Name                 | Conservation Status |
|--------------------------------------|-----------------------------|---------------------|
| <b>Birds</b>                         |                             |                     |
| <i>Aquila chrysaetos</i>             | Golden eagle                | BGEA, CFP, BCC      |
| <i>Baeolophus inornatus</i>          | Oak titmouse                | BCC                 |
| <i>Circus cyaneus</i>                | Northern harrier            | SSC                 |
| <i>Elanus leucurus</i>               | White-tailed kite           | CFP                 |
| <i>Falco peregrinus</i>              | Peregrine falcon            | CFP, BCC            |
| <i>Haliaeetus leucocephalus</i>      | Bald eagle                  | BGEA, SE, CFP, BCC  |
| <i>Picoides nuttallii</i>            | Nuttall's woodpecker        | BCC                 |
| <i>Selasphorus sasin</i>             | Allen's hummingbird         | BCC                 |
| <i>Setophaga petechia</i>            | Yellow warbler              | BCC, SSC            |
| <i>Xanthocephalus xanthocephalus</i> | Yellow-headed blackbird     | SSC                 |
| <b>Mammals</b>                       |                             |                     |
| <i>Antrozous pallidus</i>            | Pallid bat                  | SSC, WBWG High      |
| <i>Lasionycteris noctivagans</i>     | Silver-haired bat           | WBWG Medium         |
| <b>Reptiles and Amphibians</b>       |                             |                     |
| <i>Actinemys marmorata</i>           | Western pond turtle         | SSC                 |
| <i>Rana boylei</i>                   | Foothill yellow-legged frog | SC, SSC             |

Study Area may occur within one or more wildlife migration corridors, and additional focused studies may be needed to identify those corridors.

### 5.3.1 Special-Status Wildlife Species Observed within the Phase 2/Open Space Study Area

Wildlife documented to occur within the property in 2018 and 2019 are considered present in both the Phase 1 Study Area and Phase 2/ Open Space Study Area. As described for the Phase 1 Study Area (WRA 2019), 21 special-status wildlife species were observed Phase 1 and Phase 2/Open Space study areas; those species are described below, organized by conservation status and then alphabetically by species therein.

#### Federal-Protected and State-Listed Species

**Golden eagle (*Aquila chrysaetos*); Federal Bald and Golden Eagle Protection Act, California Fully Protected Species, USFWS Bird of Conservation Concern.** Golden eagle is a large raptor that occurs in open and semi-open areas from sea level to high elevations. Typical occupied habitats include grasslands, shrublands, deserts, woodlands, and coniferous forests. Breeding activity occurs broadly from January through August and is usually initiated from January to March in California. The large stick nests of this species are reused over multiple years and may be maintained throughout the year. Nests are most often located on the ledges

of steep cliffs, but nesting also occurs in large trees and on tall manmade structures (e.g., utility towers) (Kochert et al. 2002). Golden eagles forage over wide areas, feeding primarily on medium-sized mammals (e.g., ground squirrels and rabbits), large birds, and carrion.

An active golden eagle nest was observed approximately 0.2 mile south of the property (Figure 6). Adult and juvenile golden eagles were observed flying, foraging, and perching within a variety of habitats within the Phase 2/Open Space Study Area. No active golden eagle nests were observed within the Phase 2/Open Space Study Area; however, suitable nesting habitat is present and the species has potential to nest within the Phase 2/Open Space Study Area.

**Bald eagle (*Haliaeetus leucocephalus*); Federal Bald and Golden Eagle Protection Act, State Endangered, CDFW Fully Protected Species, USFWS Bird of Conservation Concern.**

Bald eagle occurs primarily as a winter visitor but also as a year-round (breeding) resident throughout most of California. Habitat is somewhat variable, but the species is usually strongly associated with larger bodies of water including lakes, reservoirs, major river systems, estuaries, and the ocean. Breeding occurs primarily in forested areas near water bodies; wintering habitat is more general, but is generally located near water. Their sizable nests are typically built in the upper portions of large, live trees that provide dominant views of surrounding areas (Buehler 2000). Bald eagles are highly opportunistic foragers; fish and waterfowl are usually favored, but a variety of live prey and carrion are consumed.

Adult and juvenile bald eagles were observed flying and roosting adjacent to multiple reservoirs in and adjacent to the Phase 2 Study Area, as well as in other habitats. In 2018, four bald eagle nests were observed in the Phase 2/Open Space Study Area, including one each at Detert Reservoir, Lake Burgundy, McCreary Lake, and Putah Creek (Figure 6). Nests of this species have been previously documented in the CNDDB within the phase 2/Open Space Study Area around McCreary Reservoir (CDFW 2019).

**Foothill yellow-legged frog (*Rana boylei*); State Candidate Threatened.** Foothill yellow-legged frog historically occurred in coastal and mountain streams from southern Oregon to Los Angeles County, but has declined in many parts of this range. This species is strongly associated with rivers and creeks, and prefers shallow, flowing water with a rocky substrate. Individuals do not typically move overland and are rarely observed far from a source of permanent water. In a study in northern California, adults were typically observed within ten feet and rarely over 40 feet from streams (Bourque 2008). Although upland habitat usage is not well-studied, the data suggest that movements away from water are related to flood events (Kupferberg 1996, Bourque 2008, Thomson et al. 2016) or autumnal rains (Cook et al 2012). Frogs in intermittent streams may move more than those in perennial streams, but movements are generally limited to within the creek corridor (Kupferberg 1996, Bourque 2008, Gonsolin 2010). Aquatic breeding sites are often located near stream confluences, with egg masses typically deposited behind or sometimes under rocks in low-flow areas with cobble and/or gravel substrate (Thomson et al. 2016).

During site assessments by WRA, foothill yellow-legged frog was observed within the Phase 2/Open Space Study Area, in association with Butts Creek, near its confluence with McCain Creek (Figure 6). Perennial and intermittent streams with rocky substrates throughout the Phase 2/Open Space Study Area provide potentially suitable habitat for the species, including both Butts and Putah creeks and potentially portions of Butcherknife, Bucksnot, and McCain creeks when favorable water levels are present.



### California Fully Protected Species

**White-tailed kite (*Elanus leucurus*); California Fully Protected Species.** The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

The Phase 2/Open Space Study Area contains open foraging habitat as well as trees and shrubs suitable for nesting by this species. White-tailed kite was observed foraging within the property, primarily in association with Lower Bohn Lake; however, no indication of nesting was observed.

**American peregrine falcon (*Falco peregrinus anatum*); California Fully Protected Species, USFWS Bird of Conservation Concern (Federal Delisted, State Delisted).** This large falcon occurs as a generally uncommon resident as well as a winter visitor and migrant throughout much of California. Occupied habitat (both breeding and non-breeding) is highly variable, but this species is typically associated with open areas and/or bodies of water. Nesting typically occurs on the ledges of steep cliffs, or on man-made structures with ledges above sheer faces such as bridges and the tops of buildings (White et. al 2002). The peregrine falcon preys upon a wide variety of animals, mostly birds; on the Pacific coast, waterbirds (e.g., waterfowl, shorebirds, and seabirds) are especially favored (White et. al 2002). This species forages over wide areas, even during the breeding season.

Reservoirs and rocky cliffs within the Phase 2/Open Space Study Area provide potential foraging and nesting habitat for this species. An active peregrine falcon nest was observed on a south-facing rocky cliff north of Bucksnot Creek, within the Phase 2/Open Space Study Area (Figure 6).

### USFWS Birds of Concern, CDFW Species of Concern, WBWG Rated-Bats

**Western pond turtle (*Actinemys marmorata*); CDFW Species of Special Concern.** Western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. Western pond turtle inhabits annual and perennial aquatic habitats, such as coastal lagoons, lakes, ponds, marshes, rivers, and streams from sea level to 5,500 feet in elevation. Pond turtle also occupies man-made habitats such as stock ponds, wastewater storage, percolation ponds, canals, and reservoirs. This species requires low-flowing or stagnant freshwater aquatic habitat with suitable basking structures, including rocks, logs, algal mats, mud banks and sand. Warm, shallow, nutrient-rich waters are ideal as they support WPT prey items, which include aquatic invertebrates and occasionally fish, carrion, and vegetation. Turtles require suitable aquatic habitat for most of the year; however, WPT often occupies creeks, rivers, and coastal lagoons that become seasonally unsuitable. To escape periods of high water flow, high salinity, or prolonged dry conditions, WPT may move upstream and/or take refuge in vegetated, upland habitat for up to four months (Rathbun et al. 2002). Although upland habitat is utilized for refuging and nesting, this species preferentially utilizes aquatic and riparian corridors for movement and dispersal. WPT nests from late April through July. This species requires open, dry upland habitat with friable soils for nesting and prefer to nest on unshaded slopes within 15 to

330 feet of suitable aquatic habitat (Rathbun et al. 1992). Nests are well-concealed, though native mammals are occasionally able to locate and predate upon eggs.

Western pond turtle was observed within portions of Bucksnot Creek, Putah Creek, and an unnamed reservoir south of Butts Creek on the west side of Butts Canyon Road (Figure 6). In addition, the other streams and large open water reservoirs with the Phase 2/Open Space Study Area provide suitable aquatic habitat, and the associated open grasslands adjacent to these features may support nesting.

**Pallid bat (*Antrozous pallidus*); CDFW Species of Special Concern, WBWG High Priority.** Pallid bat is broadly distributed throughout much of western North America and typically occurs in association with open, rocky areas. Occupied habitats are highly variable and range from deserts to forests in lowland areas and include higher-elevation forests. Roosting may occur singly or in groups of up to hundreds of individuals. Roosts must offer protection from high temperatures and are typically located in rock crevices, mines, caves, or tree hollows; manmade structures are also used, including buildings (both vacant and occupied) and bridges. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight (WBWG 2018).

The Phase 2/Open Space Study Area contains shrubland, forested habitats, rocky outcroppings, chaparral, agricultural areas and buildings that may be suitable for roosting by this species. In addition, the Phase 2/Open Space Study Area contains stream, riparian, and grassland habitats bordering open water which provides foraging habitat for this species. Pallid bat was detected within the Phase 1 Study Area using a Sonobat recording device located near a small reservoir south of Lower Bohn Lake (Figure 6) and is assumed to be present in other portions of the Phase 2/Open Space Study Area, particularly near ponds and reservoirs.

**Oak titmouse (*Baeolophus inornatus*); USFWS Bird of Conservation Concern.** This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat. Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, although they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet.

The Phase 2/Open Space Study Area contains woodland and tree cavities suitable for nesting by this species. Oak titmouse was observed in woodland communities throughout Guenoc Ranch, including at least several location within and adjacent to the Phase 2/Open Space Study Area (Figure 6). Although no nests were documented, it is assumed that this species nests within the Phase 2/Open Space Study Area.

**Northern harrier (*Circus hudsonius [cyaneus]*); CDFW Species of Special Concern.** The northern harrier occurs as a resident and winter visitor in open habitats throughout most of California, including freshwater and brackish marshes, grasslands and fields, agricultural areas, and deserts. Harriers typically nest in treeless areas within patches of dense, relatively tall, vegetation, the composition of which is highly variable; nests are placed on the ground and often located near water or within wetlands (Shuford and Gardali 2008). Harriers are birds of prey and subsist on a variety of small mammals and other vertebrates.

This species was observed foraging in marsh and grassland throughout the Phase 2/Open Space Study Area (Figure 6); however, no nesting activity was observed.

**Silver-haired bat (*Lasionycteris noctivagans*); WBWG Medium Priority.** Silver-haired bats occur in temperate forests (coniferous, deciduous, and mixed) from southern Alaska to northeastern Mexico. Females form maternity roosts almost exclusively inside hollows or under loose bark of large trees and may switch roosts several times (WBWG 2018). Hibernation occurs in trees, rock crevices, leaf litter, in and under buildings, and in caves and mines. Foraging for insects occurs above the tree canopy. Silver-haired bats are known to migrate south in the winter, although overwintering at northern latitudes has also been documented (WBWG 2018).

The Phase 2/Open Space Study Area contains potentially suitable woodland, forest, riparian, and open habitat suitable for this species. This species is likely to roost in hollow trees, snags, rock crevices, and buildings in the Phase 2/Open Space Study Area. Silver-haired bat was detected within the Phase 1 Study Area using a Sonobat recording device located near a small reservoir south of Lower Bohn Lake (Figure 6). Silver-haired bat is assumed to be present in portions of the Phase 2/Open Space Study Area, particularly near ponds and reservoirs.

**Nuttall's woodpecker (*Picoides nuttallii*); USFWS Bird of Conservation Concern.** Nuttall's woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada Range. Typical habitat is oak or mixed woodland and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where large trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

The Phase 2/Open Space Study Area contains numerous woodland areas and trees with cavities suitable for nesting by this species. Nuttall's woodpecker was observed within the woodland communities within and adjacent to the Phase 2/Open Space Study Area (Figure 6), and the species is assumed to nest there.

**Allen's hummingbird (*Selasphorus sasin*); USFWS Bird of Conservation Concern.** Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Mitchell 2000). It feeds on nectar, as well as insects and spiders.

The Phase 2/Open Space Study Area contains woodland and riparian habitats with nectar sources that may support nesting. This species was observed in multiple locations within and adjacent to the Phase 2/Open Space Study Area (Figure 6) and has potential to occur in numerous habitats throughout the site.

**(Brewster's) Yellow warbler (*Setophaga petechia brewsteri*); CDFW Species of Special Concern, USFWS Bird of Conservation Concern.** The yellow warbler is a neotropical migrant bird that is widespread in North America, but has declined throughout much of its California breeding range. The Brewster's (*brewsteri*) subspecies is a summer resident and represents the vast majority of yellow warblers that breed in California. West of the Central Valley, typical yellow warbler breeding habitat consists of dense riparian vegetation along watercourses, including wet meadows, with willow growth especially being favored (Shuford and Gardali 2008). Insects comprise the majority of the diet.

The Phase 2/Open Space Study Area contains riparian areas with dense vegetation to support nesting by this species. This species was observed within at least one location adjacent to the

Phase 2/Open Space Study Area (Figure 6) and has potential to occur within riparian habitat throughout the Phase 2/Open Space Study Area.

**Yellow-headed blackbird (*Xanthocephalus xanthocephalus*); CDFW Species of Special Concern.** The yellow-headed blackbird occurs as a summer resident and migrant in southern California, with a patchy breeding distribution. This species nests colonially or semi-colonially in marshes dominated by tall emergent vegetation (e.g., cattails, tules), and with relatively deep water. Because of the latter requirement, marshes utilized for nesting are often along the edges of lakes and larger ponds (Shuford and Gardali 2008). Adults during the breeding season forage primarily for large aquatic insects such as dragonflies and damselflies.

The Phase 2/Open Space Study Area contains marshes with tall emergent vegetation suitable for this species. Yellow-headed blackbird was observed nesting in emergent vegetation within the Phase 2/Open Space Study Area (Figure 6), near McCreary Lake, and has potential to occur in association with other large ponds and reservoirs throughout the Phase 2/Open Space Study Area.

### 5.3.2 Special-Status Wildlife Species with Potential to Occur

Due to the ability of wildlife to move between suitable habitats within the property, the potential for special-status species to occur within the Phase 2/Open Space Study Area was determined to be the same as their potential to occur within the Phase 1 Study Area. While the Phase 2/Open Space Study Area may contain a higher or lower concentration of certain habitat types relative to the Phase 1 Study Area, the differences in habitat composition are not significant enough to change the potential for special-status species to occur. The 21 special-status wildlife species listed in Table 8 were determined to have moderate to high potential to occur within the Phase 2/Open Space Study Area based on the types and condition of habitats found there. The preferred habitat for each of these species is described in Appendix G.

Table 8. Special-Status Wildlife Species with Potential to Occur within the Phase 2/Open Space Study Area

| Scientific Name                | Common Name                | Conservation Status |
|--------------------------------|----------------------------|---------------------|
| <b>Mammals</b>                 |                            |                     |
| <i>Bassariscus astutus</i>     | Ring-tailed cat (ringtail) | CFP                 |
| <i>Corynorhinus townsendii</i> | Townsend's big-eared bat   | SSC, WBWG High      |
| <i>Lasiurus blossevillii</i>   | Western red bat            | SSC, WBWG High      |
| <i>Lasiurus cinereus</i>       | Hoary bat                  | WBWG Medium         |
| <i>Myotis evotis</i>           | Long-eared myotis          | WBWG Medium         |
| <i>Myotis thysanodes</i>       | Fringed myotis             | WBWG High           |
| <i>Myotis volans</i>           | Long-legged myotis         | WBWG High           |
| <i>Taxidea taxus</i>           | American badger            | SSC                 |
| <b>Birds</b>                   |                            |                     |
| <i>Agelaius tricolor</i>       | Tricolored blackbird       | ST, SSC, BCC        |
| <i>Ammodramus savannarum</i>   | Grasshopper sparrow        | BCC                 |
| <i>Asio otus</i>               | Long-eared owl             | SSC                 |

| Scientific Name                     | Common Name            | Conservation Status |
|-------------------------------------|------------------------|---------------------|
| <i>Athene cunicularia</i>           | Burrowing owl          | SSC, BCC            |
| <i>Contopus cooperi</i>             | Olive-sided flycatcher | SSC, BCC            |
| <i>Falco mexicanus</i>              | Prairie falcon         | BCC                 |
| <i>Icteria virens</i>               | Yellow-breasted chat   | SSC                 |
| <i>Ixobrychus exilis</i>            | Least bittern          | SSC, BCC            |
| <i>Lanius ludovicianus</i>          | Loggerhead shrike      | SSC, BCC            |
| <i>Melanerpes lewis</i>             | Lewis' woodpecker      | BCC                 |
| <i>Progne subis</i>                 | Purple martin          | SSC                 |
| <i>Spinus [Carduelis] lawrencei</i> | Lawrence's goldfinch   | BCC                 |
| <i>Spizella atrogularis</i>         | Black-chinned sparrow  | BCC                 |

## 6.0 SUMMARY AND RECOMMENDATIONS

Twelve sensitive plant communities were identified within the Phase 2/Open Space Study Area, including approximately 330 acres of wetlands, 148 acres and 736,000 linear feet of streams, and 626 acres of ponds and reservoirs. Twenty-eight special-status plant species and 14 special-status wildlife species were observed within the Phase 2/Open Space Study Area. An additional 60 special-status plant species and 21 special-status wildlife species were determined to have moderate to high potential to occur within the Phase 2/Open Space Study Area. The project has the potential to result in direct and indirect impacts to these sensitive resources, and the measures presented below are recommended to reduce those impacts to a less than significant level under CEQA. The measures presented here have been developed at the programmatic-level; additional measures may be required as specific elements of the project are designed and a detailed impact analysis can be conducted.

The preferred approach for minimizing impacts to sensitive resources found within the Phase 2/Open Space Study Area is avoidance during project design. In some areas it may be impracticable or infeasible to avoid sensitive resources and some impacts may be anticipated. These impacts should be minimized to the fullest extent practicable and feasible through the use of Best Management Practices (BMPs) and other measures. The remaining minor impacts may be mitigated through a combination of onsite preservation and enhancement or restoration of sensitive biological communities and habitats for special-status plant and wildlife species.

### 6.1 General Measures

The following general BMPs and avoidance and minimization measures are recommended:

1. An environmental awareness training shall be provided to personnel working on the project. The training should include materials that describe the sensitive habitats and species present and the measures that have been incorporated into the project to protect those habitats and species. The training materials should be prepared by a qualified biologist who will train a member of the contractor's crew to provide follow-up trainings to newly hired employees during the construction period. These materials may be updated as new information is available.

2. All work areas, including parking and staging areas, should be the minimum size necessary to implement the project and should be clearly delimited prior to implementation of any work.
3. All trash and debris should be confined in enclosed bins located within staging areas.
4. No pets should be allowed within the construction area.
5. Any soil or other material stockpiled during construction that could be easily transported by wind or rain should be covered when not actively in use.
6. No materials should be placed where they may enter sensitive habitat, receiving waters, or a storm drain, or be subject to wind or runoff erosion and dispersion.
7. Appropriate washout, trackout, and dust control BMPs should be implemented during construction.
8. All vehicles and equipment scheduled for use in construction on the site should be clean and free of mud or vegetation that could introduce plant pathogens or propagules of non-native plants. This includes equipment hauled into the site. The importance of this measure will be discussed in the environmental awareness training materials.
9. No construction vehicles or machinery should be allowed outside of the delimited parking, staging, and work areas.
10. All vehicles and equipment used on site should be well maintained and checked upon site entry for fuel, oil, and hydraulic fluid leaks or other problems that could result in spills of toxic materials. Drip pans should be used under all vehicles and equipment when not in active use.
11. All vehicle fueling and maintenance activities should occur at least 100 feet away from any wetland, stream, or other water body.
12. Operation of vehicles and equipment should be limited to the hours from 7:00 am to 7:00 pm or from half an hour after sunrise to half an hour before sunset.
13. A Stormwater Pollution Prevention Plan (SWPPP) should be developed for the project in accordance with the Lake County Clean Water Program and all measures included in the SWPPP should be implemented during all phases of construction, as appropriate.
14. Temporary erosion control materials should be inspected on a regular basis consistent with the SWPPP during construction, and any required repairs should be implemented immediately.
15. For any work within aquatic features or their setback, the contractor should be prepared to handle any localized hazardous waste spills (e.g. gas, oil, or pesticides). Spill control and clean-up materials (e.g., oil absorbent pads, fiber

rolls) should be kept on-site at all times in case a spill occurs. Any waste materials including, but not limited to, raw cement/concrete or washings thereof, asphalt, paint, construction waste, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, should be prevented from contaminating the soil and/or entering any waterways.

16. All erosion control materials should use certified weed-free straw or other biodegradable, weed-free materials. No materials containing monofilament netting should be used.

## **6.2 Biological Communities**

### **6.2.1 Sensitive Terrestrial Communities**

The Phase 2/Open Space Study Area contains nine sensitive terrestrial communities including five woodland communities (white alder groves, Sargent cypress woodland, mixed oak forest, blue oak woodland and savanna, valley oak woodland, and interior live oak woodland), two shrubland communities (musk brush chaparral and Brewer willow thickets), and one herbaceous community (purple needle grass grassland). While they have no legal standing, chaparral communities on serpentine soils within the Phase 2/Open Space Study Area provide high value for rare plants and should also be considered during project design and entitlement.

While project-specific impacts may require additional measures, the following programmatic measures are recommended to avoid impacts to sensitive terrestrial communities:

1. Minimize impacts to sensitive terrestrial communities to the extent practicable and feasible through avoidance during project design.
2. Given the limited distribution of valley oak woodland, which has a CDFW rarity ranking of S3 indicating that it has limited distribution within California, as well as the difficulty in regenerating this community, it should be avoided in its entirety if possible and if not possible completely mitigated to include an increase in planting to meet the goal of no significant impact consistent with the Oak mitigation plan prepared under #4 below.
3. To mitigate for unavoidable impacts to oak trees, an oak woodland mitigation plan should be developed that minimizes impacts and compensates for any loss of oak woodland (or in the case of oak savannah, individual trees) through a combination of enhancement (e.g., weed management within existing oak woodlands), restoration or creation (e.g., oak planting or seeding), transplanting, and/or preservation (e.g., placement of conservation easements over existing stands of high quality oak woodlands at least acre per acre 1:1). The plan should also include a monitoring and adaptive management component and clear performance standards. The plan should be approved by the County of Lake prior to any impacts.
4. Purple needle grass grassland should be avoided to the extent practicable and feasible. To mitigate for unavoidable impacts to purple needle grass grassland, mitigation should be developed that minimizes impacts and compensates for any loss of native grassland through some combination of enhancement (e.g., weed management within existing native grasslands), restoration or creation (e.g., native



grassland seeding), and preservation (e.g., placement of conservation easements over existing stands of high quality native grasslands). The mitigation should also include a robust monitoring and adaptive management component and clear performance standards. The mitigation should be approved by the County of Lake prior to any impacts.

5. To the extent feasible and practicable, minimize impacts to serpentine chaparral communities which have high potential to host rare plants and may contain one or more sensitive plant associations.

### 6.2.2 Sensitive Aquatic Communities

The Phase 2/Open Space Study Area contains a large network of wetlands, streams, ponds, reservoirs, and riparian habitat which are variously regulated by the Corps, RWQCB, and/or CDFW. While project-specific impacts may require additional measures, the following programmatic measures are recommended to avoid, minimize, or mitigate for impacts to aquatic communities:

1. The County of Lake defines setbacks from streams, ponds, wetlands, and riparian habitats that should be incorporated into the project design:
  - a) 30 feet from the top of bank any perennial stream,
  - b) 20 feet from the top of bank of any intermittent stream,
  - c) 20 feet from the edge of any adjacent wetlands or the ordinary high water mark of other bodies of water, or
  - d) To the outer extent of vegetation dominated by common riparian species such as Fremont cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), box elder (*Acer negundo*), dogwood (*Cornus* spp.), willow (*Salix* spp.), and big leaf maple (*Acer macrophyllum*) (this latter zone may extend beyond 30 feet).

No setbacks are clearly defined by the County for ephemeral streams. However, for the purposes of this report, it is assumed that ephemeral streams are “other bodies of water” as stated in c) above. Therefore, a minimum setback of 20 feet or as directed by a qualified biologist, from the ordinary high water mark on natural ephemeral streams should be incorporated. No setback is required for man-made stormwater or irrigation ditches. In areas where ground disturbance will occur in close proximity to aquatic resources or riparian habitat, sediment control measures such as silt fencing and/or straw wattles should be installed between the work area and the appropriate setback.

2. Prior to any impacts to protected aquatic resources, the project proponent should submit applications for necessary permits from the Corps, RWQCB, CDFW, and/or County of Lake. Any avoidance, minimization, or compensatory mitigation measures required by those permits should be incorporated into the project design. An aquatic resources mitigation plan (HMMP) will be submitted as part of the permit applications in accordance with federal and state requirements. It is likely that most of the compensatory mitigation actions can be accomplished on-site within the project boundaries; however, off-site mitigation and purchase of mitigation credits may also be appropriate in some cases.

### 6.3 Special-Status Plant Species

WRA documented 27 special-status plant species within the Phase 2/Open Space Study Area during seasonally timed and reconnaissance-level surveys conducted in 2018 and 2019, including one federal-listed species, one state-listed species, seven CNPS Rank 1 species, and 18 CNPS Rank 4 species. The bulk of these plants occur either on serpentine soils or in wetlands and along stream corridors; however, special-status plants occur in other habitats as well. The following programmatic measures are recommended to avoid, minimize, or mitigate for impacts to special-status plants:

1. Pre-construction botanical surveys of herb-dominated habitats with the potential to support special-status plants (i.e. grasslands, wetlands) shall be conducted prior to ground breaking for each specific project component if more than one year has passed since most recent survey (i.e. areas surveyed in 2017 require surveys in 2020, however areas surveyed in 2019 require surveys in 2021). Pre-construction surveys of shrub or woodland dominated habitats with the potential to support special-status plants shall be surveyed prior to groundbreaking for each specific project component if more than four years have passed since most recent survey (i.e. shrub/woodland areas surveyed in 2017 will require surveys in 2022). Initial vegetation clearing along proposed roadways for fire management shall also be subject to these standards. Pre-construction surveys shall be completed by a qualified biologist during the appropriate identification period for plants with the potential to occur in the area scheduled for ground breaking.
2. To the extent feasible and practicable, all occurrences of special-status plants should be avoided during project design. To ensure no direct impacts, individual occurrences of special-status plants should be avoided by a minimum of 20 feet. Where ground disturbance will occur upslope of occurrences of special-status plants, silt fencing or straw wattles should be installed between the work area and the 20-foot setback and should not be removed until the disturbed areas have been revegetated or otherwise stabilized and the risk of erosion has been minimized.
3. When avoidance is not feasible or practicable, species-specific mitigation should be developed that minimizes impacts and compensates for any loss of federal or state listed rare, threatened, or endangered plant occurrences through a combination of enhancement (e.g., weed management and supplemental seeding within existing stands of the species in question), restoration or creation (e.g., establishment of new populations), and preservation (e.g., placement of appropriate protective assurances over existing examples of high quality occurrences). This mitigation for these species will need approval by the appropriate federal and/or state agency under which they are listed as part of the permitting process. In addition, for unavoidable impacts to those species which are considered CNPS Rank 1, mitigation should be undertaken through implementation of a species-specific mitigation developed and approved by the County.
4. Any mitigation should follow generally acceptable rare plant mitigation guidelines and should consider the specific ecology of the species in question, as well as the conservation status and the number of occurrences within the overall ranch. The mitigation should also include regularly scheduled monitoring, an adaptive management component, and clear performance standards to ensure success.

5. Federal-listed, state-listed, and CNPS Rank 1 species should be prioritized for avoidance. Where avoidance of these species is not possible, they should be considered for relocation or reestablishment in other portions of the property.
6. CNPS Rank 4 species that occur in limited numbers and/or limited locations (e.g., tall snapdragon, which occurred in only two locations within the Phase 2/Open Space Study Area) should be reviewed with the County of Lake to determine appropriate mitigation measures.
7. CNPS Rank 4 species that occur in large numbers and numerous locations (e.g., Jepson's navarretia, which occurred on serpentine balds in numerous locations across the property and numbered in the hundreds of thousands) should be reviewed with the County of Lake to determine appropriate mitigation measures.
8. Impacts to federal- or state-listed plant species may require consultation with the USFWS under Section 7 or Section 10 of the Endangered Species Act and/or application for a CFGC Section 2080 Consistency Determination (if a USFWS Biological Opinion is issued) or Section 2081 Incidental Take Permit (if a USFWS Biological Opinion is not issued or the species is state-listed only).

#### **6.4 Special-Status Wildlife Species**

Fourteen special-status wildlife species were documented within the property, including one State-Endangered species, one State-Candidate species, and several California Fully Protected species, in addition to other special-status species. An additional 21 special-status wildlife species were determined to have potential to occur. The Phase 2/Open Space Study Area is not located within Critical Habitat as designated by USFWS or NMFS, as Lake Berryessa forms a total barrier to anadromous fish including steelhead and Chinook salmon.

The following recommendations and potential constraints are provided based on the potential for special-status species and their habitat to occur within the Phase 1 Study Area. Where applicable, species with similar requirements and guidance are grouped together.

##### **6.4.1 Special-Status Mammals**

###### **Bats**

Two special-status bat species and five non-status bat species were determined to be present within the property. There is moderate or high potential for an additional six bat species to occur within the undisturbed oak woodland, riparian woodland, rock outcrops and buildings within the property. Direct impacts to roosting special-status bat species could occur due to the removal or modification of large trees (diameter at breast height [DBH] >12 inches), snags, and/or buildings. The destruction or injury of special-status bats or loss of a maternity roost would constitute a potentially significant impact under CEQA and is a violation of the CFGC. Indirect impacts to maternity roosting and/or roosting bat species may include roost abandonment due to noise, increased nighttime lighting and/or other human disturbances during construction and would also constitute a potentially significant impact under CEQA.

The following programmatic measures are recommended to avoid impacts to roosting bats:

1. Pre-construction survey(s) for bat roosts should be conducted by concentrating on large trees (DBH >12 inches), broadleaf trees in riparian woodland habitat, buildings, bridges, and cliffs/rocky outcroppings within 100 feet of any planned work areas. Surveys should occur no more than 14 days prior to the start of work, and one or more surveys may be needed for the biologist to evaluate whether potential roost habitat occurs and to determine the type (i.e., maternity or non-maternity) and status (i.e., active or inactive) of the roost. If an active maternity or special-status bat roost is found and is proposed to be removed or directly impacted as a result of project activities, consultation with the CDFW will be required.
2. If large trees (DBH >12 inches) identified as potential bat roosts that are not active maternity or special-status roosts are to be removed, they should be flagged by the surveying biologist. On the first day of removal of flagged trees, if weather conditions permit, limbs shall be removed in the late afternoon from flagged trees. This disturbance should cause any roosting bats to locate an alternative roost during their nighttime foraging. As potentially roosting bats will have left over the course of the night, the rest of the tree can be harvested on the second day. On the second day, if weather conditions permit, the trees shall be felled as late in the afternoon as is practicable. If weather conditions are not conducive to having the tree taken down on the second day and the procedure has been interrupted, an additional emergence survey shall be conducted the evening before taking the tree down in late afternoon.

### Other Mammals

American badger is a SSC with moderate potential to occur in the Phase 2/Open Space Study Area. Ringtail is a CFP species with moderate potential to occur in the Phase 2/Open Space Study Area. Direct impacts to open grassland and oak woodland could potentially impact habitat for American badger and ringtail. While project-specific impacts may require additional measures, the following programmatic measures are recommended to avoid impacts to American badger and ringtail:

1. No more than 14 days before the start of ground disturbance activities within open grassland, oak woodland, or riparian forest habitat, a biologist should conduct pre-construction surveys to determine if American badger or ringtail dens are present.
2. If American badger dens are determined to be present, the biologist should monitor them for activity to determine whether the den is active. If the den is determined to be occupied by a female with young, ground disturbance and construction activity should be avoided within 50 feet of the den until the young have matured and dispersed. If the den is determined to be active, but a female with young are not present, burrow exclusion using passive measures such as one-way doors or equivalent should be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens should be excavated by hand to prevent them from being re-occupied during construction.

3. If ringtail dens with young are determined to be present within the work area, the biologist should establish a clearly marked exclusionary buffer of no less than 50 feet and no ground disturbance should take place within the buffer until the biologist determines the den is no longer active with young.

#### *6.4.2 Special-Status Birds*

##### Raptors

Targeted raptor surveys determined that golden eagle, bald eagle, white-tailed kite, northern harrier and American peregrine falcon nest in or adjacent to portions of the Phase 2/Open Space Study Area. Although it was not observed, suitable habitat for prairie falcon is present and it was determined that the species has a moderate potential to occur in the Phase 2/Open Space Study Area. The Phase 2/Open Space Study Area provides foraging habitat and has the potential to support nesting for each of these species.

Eagle nests are protected by the Bald and Golden Eagle Protection Act, the MBTA, and the CFGC. Direct impacts to nest trees (e.g., trimming or completely removing the nest tree or adjacent trees) while the nest is active may result in death or injury to eggs or young, and potentially adults as well. Additionally, indirect disturbance caused by project related activities (e.g., noise, vibration and/or visual disruption resulting from grading or construction), and introduction of toxic or otherwise harmful chemicals into the prey base of bald and golden eagles have the potential to impact eagle nesting activities. Any direct impacts that result in nest failure or mortality may constitute a violation of the Bald and Golden Eagle Protection Act, as well as potentially the MBTA and multiple sections of the CFGC. White-tailed kite and peregrine falcon nests are also protected by the MBTA and CFGC. Protective exclusion buffers around active raptor nests can vary greatly and may extend up to 0.5 mile. While project-specific impacts may require additional measures, the following programmatic-level measures are recommended to avoid impacts to raptors:

1. Prior to starting construction activities during the nesting season, generally defined as February 1 through August 31, targeted surveys for active raptor nests should be conducted. An active nest contains eggs or young.
2. For construction activities planned within 0.5 miles of a documented eagle or protected falcon species nest, pre-construction surveys should be conducted in accordance with the most current guidance available from USFWS and CDFW.
3. If a non-status raptor nest containing eggs or young is determined to be present within the work area, then a protective buffer should be implemented and no project work should occur within the buffered area until the chicks have fledged and no longer require parental support for survival, or the nest has been determined to be inactive. Buffer size should be determined by the biologist based on species, nest location, planned disturbance footprint, and presence of any visual or auditory buffers.
4. If a special-status raptor nest is determined to be present within the work area, or within 0.5 mile of the work area, consultation with the USFWS and/or CDFW should occur and any measures recommended or required by those agencies should be incorporated into the project design.

##### Burrowing Owl

Burrowing owl is listed as a species of special concern by the CDFW. While the species was not observed during site assessments, ground squirrels and potentially suitable habitat was present, and suitable burrows may exist in the future. This species is migratory and may occur in portions of the Phase 2/Open Space Study Area. Project activities that would remove or destroy burrows and impact grassland habitat containing suitable burrows, may result in a direct impact to burrowing owl. While project-specific impacts may require additional measures, the following programmatic-level measures are recommended to avoid impacts to burrowing owls:

1. A pre-construction survey should be performed prior to start of ground disturbance activities where ground squirrel burrow complexes are present. This survey should occur regardless of the time of year, as burrowing owls may use the Study Area during the non-nesting season. The survey should be performed according to the standards set forth by the Staff Report for Burrowing Owl Mitigation (CDFW 2012), unless more current guidance has been released.
2. If the species or its sign, which includes feathers, pellets, or whitewash, are found at a burrow during the nesting period, project activities should be excluded from within a 250-foot buffer surrounding the occupied burrows until the owls are no longer present or the burrows have been abandoned. The nesting period is defined as February 1 through August 31.
3. Passive exclusion techniques, such as one-way doors, can be used to exclude burrowing owl from occupied burrows outside the nesting season or if a burrow is determined not to support an active nest. An active nest includes those with eggs or young. Once exclusion is completed, the burrows should be collapsed to avoid attracting owl back to the planned or active work area.

### Nesting Birds

In addition to the aforementioned raptor species, the site assessment determined that special status bird species Allen's hummingbird, Nuttall's woodpecker, oak titmouse, yellow-headed blackbird, and yellow warbler are present within or adjacent to the Phase 2/Open Space Study Area. Ten other special status bird species, in addition to burrowing owl previously discussed, were determined to have a moderate to high potential to occur within the Phase active nest include those with eggs or young. Once exclusion is completed, the burrows should be Study Area. A variety of non-status native bird species protected under the MBTA and the CFCG may use the Phase 2/Open Space Study Area for nesting.

Avoidance of nesting birds is considered a general biological resources "best practice" in California and avoids potential enforcement action by the CDFW. Nesting bird pre-construction survey obligations are a common component of various permits and authorizations, including local grading permits, and such, may be deemed applicable to project activities within the Phase 2/Open Space Study Area.

Initial vegetation removal, clearing, grubbing activities, along with building removal and demolition of structures, have the potential to affect nesting migratory birds including: prairie falcon, long-eared owl, least bittern, purple martin, olive-sided flycatcher, Allen's hummingbird, Nuttall's woodpecker, Lewis' woodpecker, loggerhead shrike, oak titmouse, yellow warbler, yellow-breasted chat, black-chinned sparrow grasshopper sparrow, Lawrence's goldfinch, yellow-headed blackbird, and tricolored blackbird. Adverse effects to nesting birds covered by the MBTA and the CFCG, including active nests, eggs and young, would constitute a potential impact that

may occur as a result of these activities. While project-specific impacts may require additional measures, the following programmatic-level measures are recommended to avoid impacts to nesting birds:

1. If vegetation removal, demolition of buildings or work on bridges, or initial ground disturbance activity occur during the nesting season, defined as February 1 through August 31, then a pre-construction nesting bird survey within the work area should be completed by a biologist no more than 14 days (or the time interval set by Department permits issued for the project) prior to the start of work.
2. If active nests (nests with eggs and/or chicks) are observed during the pre-construction survey, project activities should avoid the area as determined by the biologist and resume the protective buffer only after the young have fledged the nest or the nest otherwise becomes inactive. Buffer size should be determined by the biologist based on species, nest location, planned disturbance footprint, and presence of any visual or auditory buffers.

#### *6.4.3 Special-Status Reptiles and Amphibians*

This assessment determined that western pond turtle (WPT) and foothill yellow-legged frog (FYLF) are present in the Phase 2/Open Space Study Area. Direct impacts to stream features, floodplains, wetlands, ponds, and reservoirs could result in the loss of suitable habitat or potential take of amphibian and reptile species. WRA recommends the development of project-specific avoidance and minimization measures. Work taking place within any river, stream, or lake in the Phase 2/Open Space Study Area subject to Fish and Wildlife jurisdiction would require a CDFW Lake or Streambed Alteration Agreement (LSAA). Measures that may be included in an LSAA are discussed below.

##### Western Pond Turtle

This assessment determined that western pond turtle (WPT) and foothill yellow-legged frog (FYLF) are present in the Phase 1 Study Area. Direct impacts to stream features, floodplains, wetlands, ponds, and reservoirs may result in the loss of suitable habitat or potential take of amphibian and reptile species. Work taking place within any river, stream, or lake in the Phase 1 Study Area would require a CDFW Lake or Streambed Alteration Agreement (LSAA). Measures that may be included in an LSAA are discussed below.

1. To the extent possible, initial ground disturbance, vegetation clearing, and associated project activities within 300 feet of ponds, reservoirs, or wetted streams that may support WPT shall occur between July 1 and October 31 to avoid the peak nesting season and winter inactivity periods.
2. No more than 14 days prior to the start of work, pre-construction surveys for WPT should occur within 300 feet of ponds, reservoirs, or wetted streams which may support WPT. If the species is observed, the biologists should provide measures to avoid directly impacting the species based on the planned work; such measures may include a protective no-work buffer, exclusion fencing, monitoring, or coordination with CDFW, if relocation is required.

### Foothill Yellow-Legged Frog

Work within streams, riparian areas, and along streamside corridors could impact FYLF by disrupting migratory movements, rearing, or breeding and could result in direct injury or mortality of individuals. Additional impacts may occur from the removal or altering of habitat, such as those associated with the loss of cover or altering localized water flow. Although there is no time of year when complete avoidance of FYLF is possible if working in an area where the species is known to occur, there are periods when encountering the species is less likely (CDFW 2018b). Conducting work outside the typical FYLF breeding season away from wetted features allows for the greatest opportunity for avoidance (CDFW 2018b). While project-specific impacts may require additional measures, the following programmatic-level measures are recommended to avoid impacts to FYLF:

1. Work within 100 feet of any wetted stream feature or associated riparian area where foothill yellow-legged frog (FYLF) has been documented should occur during the dry months (July 1 through October 31) as possible. Timing shall also occur outside of the FYLF breeding season (March 1 to June 30) to the extent possible.
2. Pre-construction surveys for FYLF within any wetted stream feature near a work area should be conducted by a qualified biologist at least 14 days prior to the onset of construction activities. Surveys should cover at least 500 feet upstream and 500 feet downstream of the work area for presence of all life stages. Surveys should be conducted during the day and under optimal conditions for detecting FYLF. Additional pre-construction surveys may be required as determined by the qualified biologist. If FYLF are detected, measures to avoid the species should be implemented. Such measures may include, but are not limited to, a protective no-work buffer, exclusion fencing, monitoring, and/or coordination with CDFW, if relocation is required.

FYLF is currently a candidate species for listing under CESA and as such is afforded the protections conveyed by CESA, including protection from “take” without a permit. The clade that occurs in the Project Area has been evaluated as not warranting listing under CESA at this time by the CDFW Staff Review and the CDFG commission has voted to adopt this finding. While the species is technically still a candidate for listing, the ending of candidacy for this clade is imminent and is not likely to result in listing under CESA. However, this clade will remain a species of special concern and will continue to be considered during CEQA processes and permitting processes administered by CDFW. While the implementation of the above described measures should minimize impacts to the species, there is a potential for incidental take of FYLF to occur during work activities in and adjacent to FYLF habitat and this take would still require an ITP, if it occurs during the candidacy period.

#### *6.3.4 Wildlife Corridors*

This assessment determined that portions of the Phase 2/Open Space Study Area may facilitate wildlife movement and may be considered a wildlife corridor. The conversion of raw land, conversion to agriculture or installation of buildings and fencing, and increased prevalence of human disturbance can diminish or eliminate properties that make an area a corridor for native species. Under CEQA, project impacts to wildlife corridors should be assessed and evaluated.



WRA recommends that a wildlife corridor assessment be conducted utilizing GIS-based software or similar accepted method to evaluate topography and biological communities as identified in the Phase 2/Open Space Study Area based on species-specific habitat requirements for wildlife species that utilize corridors for long-distance movement. The assessment will help identify areas where wildlife movement may be facilitated and help identify if avoidance and minimization measures should be implemented.

That being said there is an approximately 3,000 acre protect open space/wildlife corridor and preserved riparian corridors that runs through Phase 1 that provides wildlife passageways.

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## **APPENDIX A**

### **BIOLOGICAL COMMUNITIES MAPPED WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**

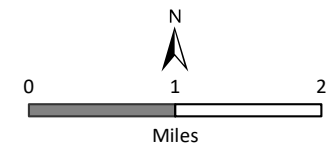
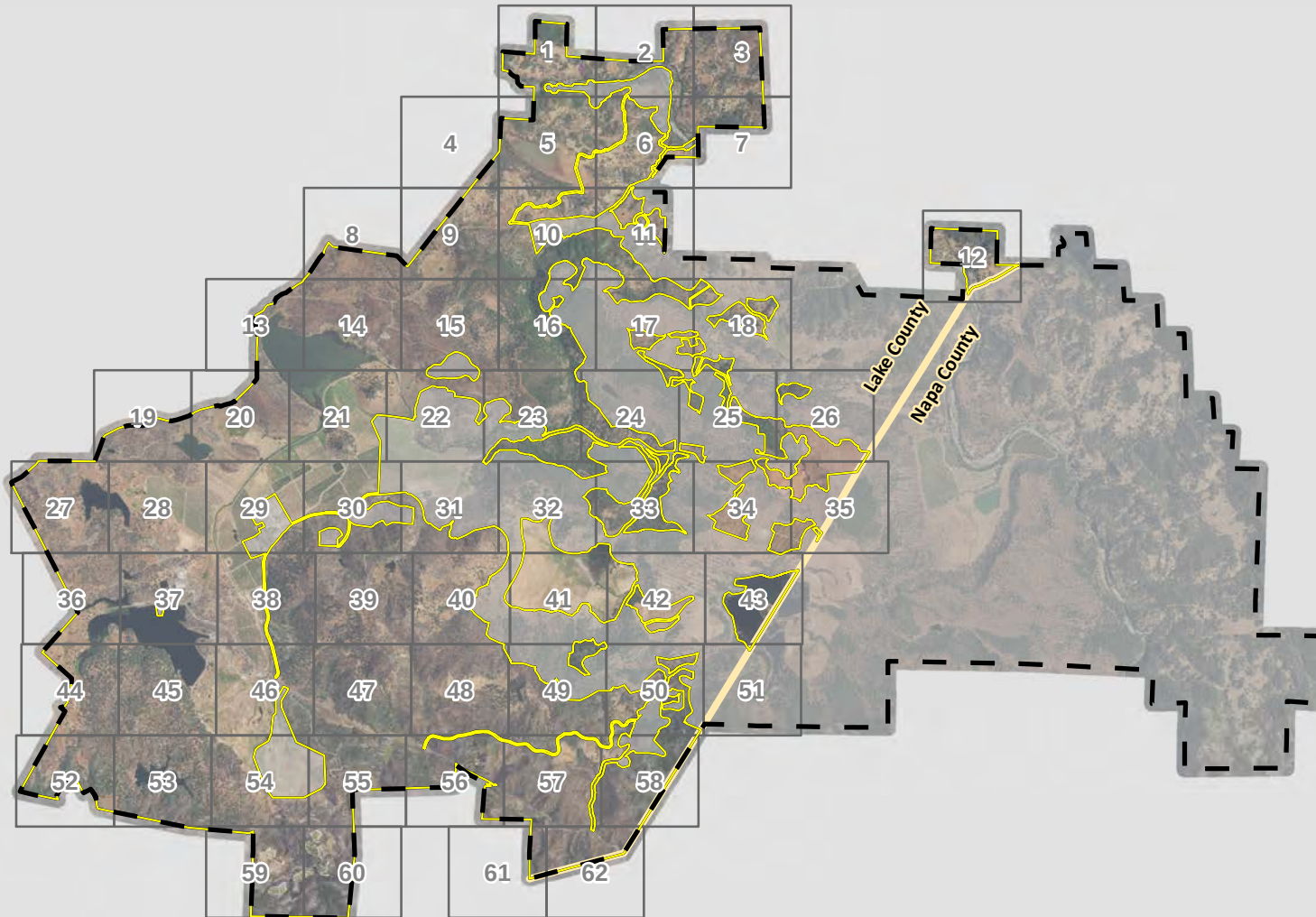




# Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Overview)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

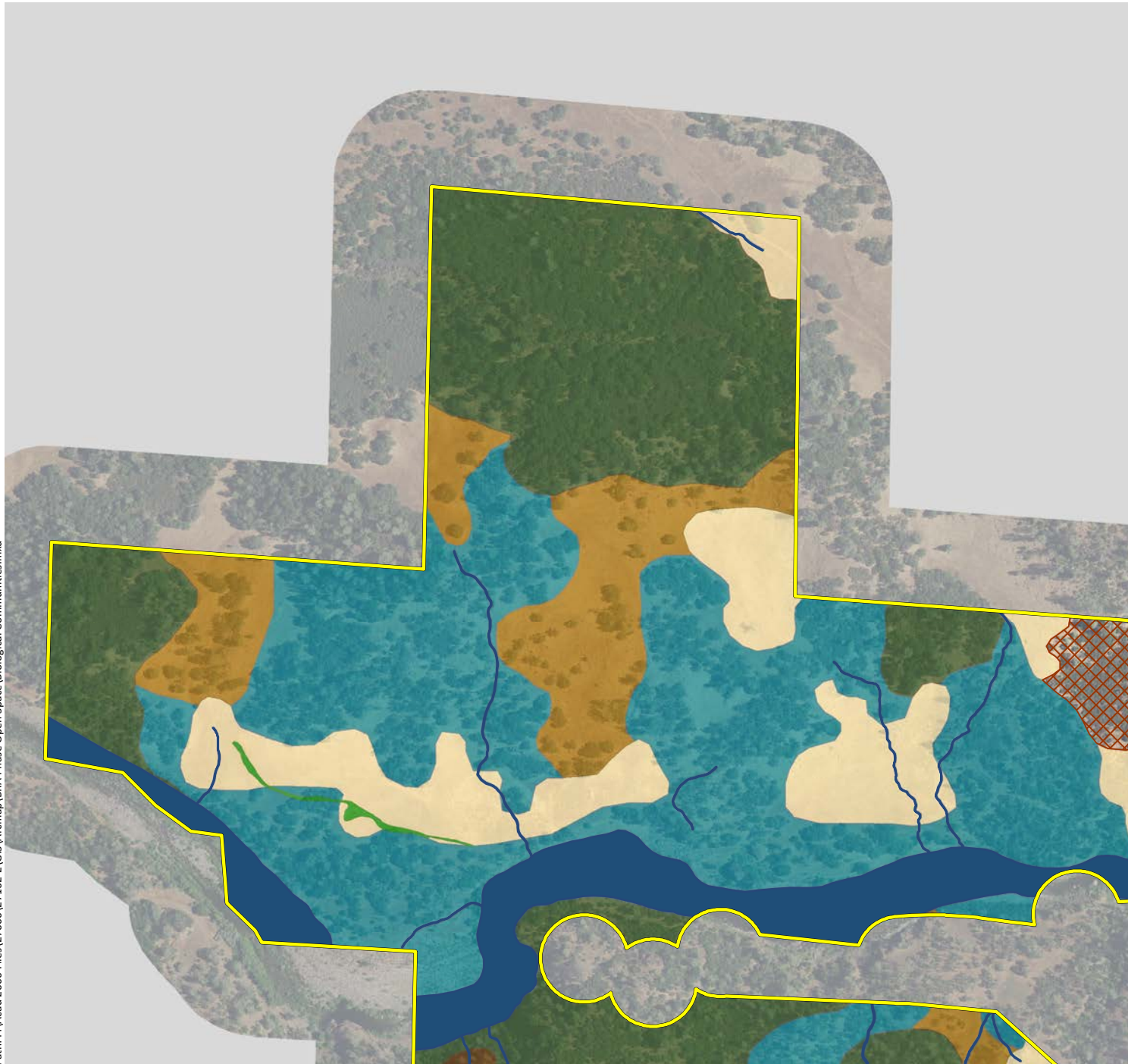
-  Property Boundary
-  Phase 2 and Open Space Study Area
-  Mapbook Grid
-  County Boundary



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Mapbook Overview Biological Communities.mxd

Sources: Hexagon 2016 Aerial, WRA | Prepared By: mrochelle, 6/28/2019

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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 1)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

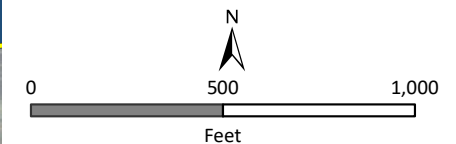
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

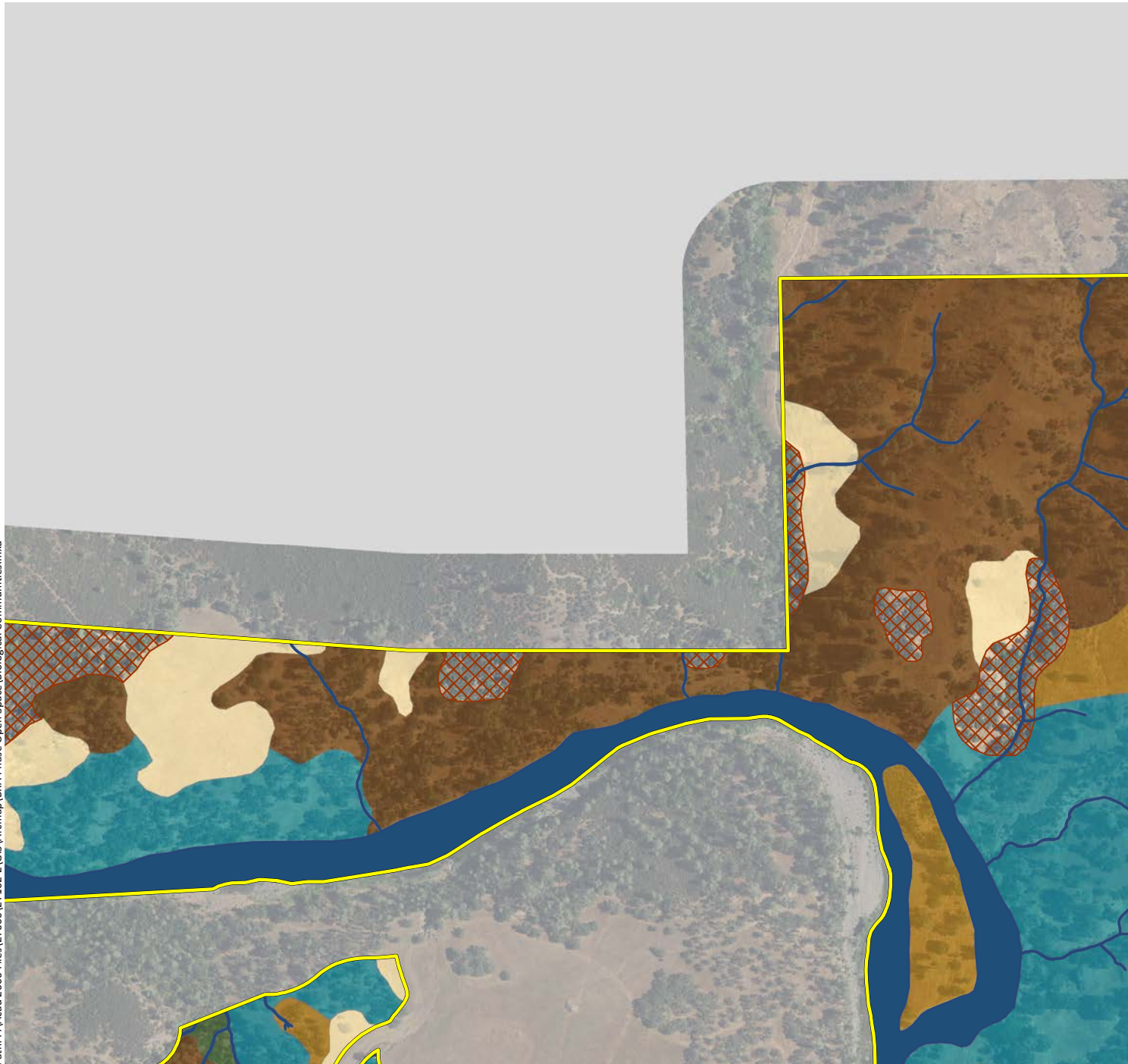
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Biological Communities.mxd



## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 2)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

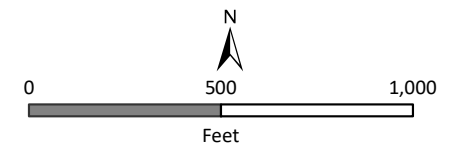
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
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-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

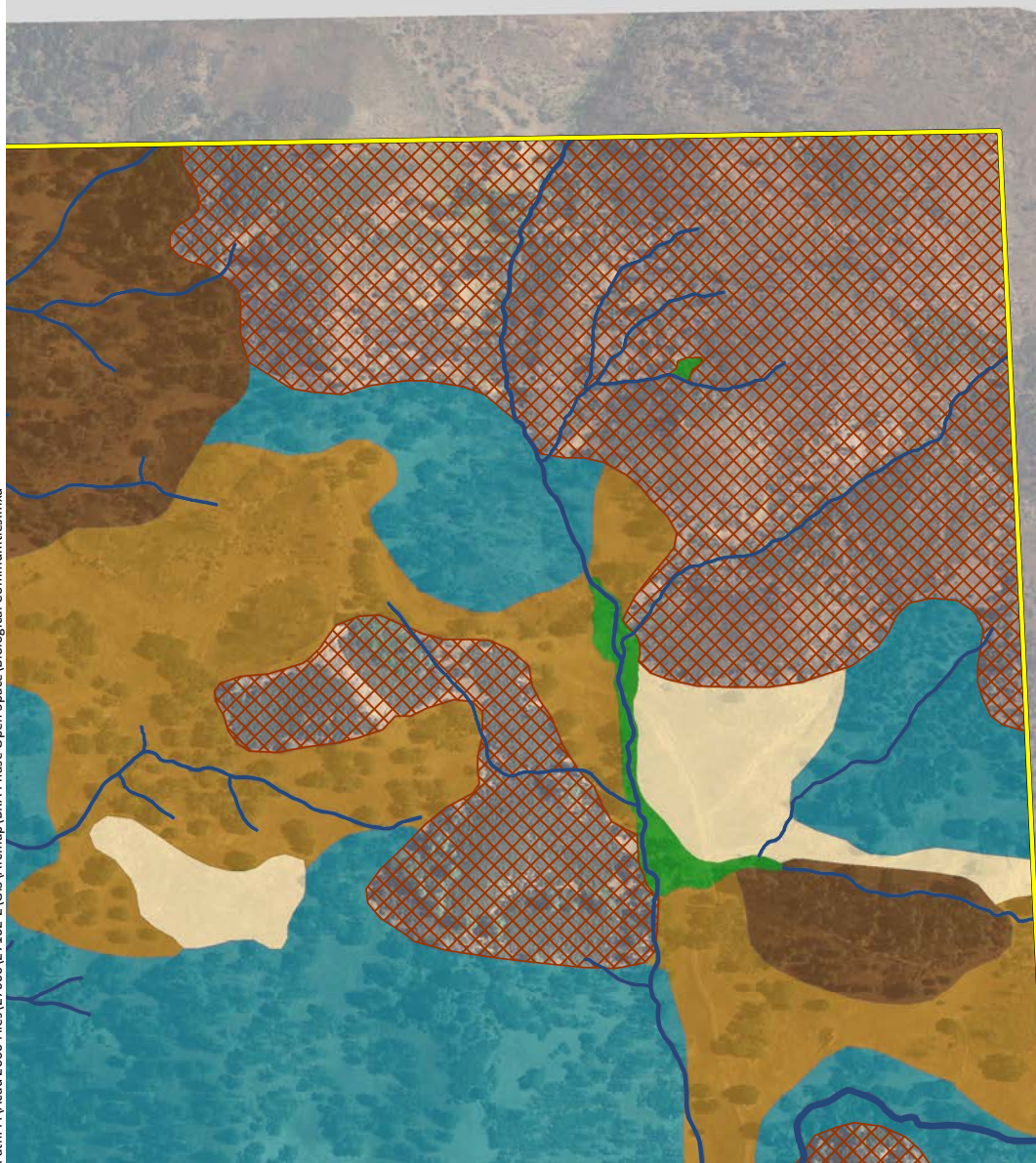
### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 3)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

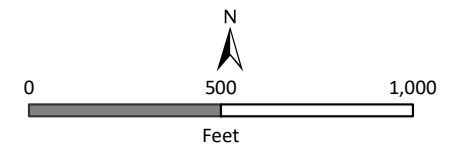
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 4)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

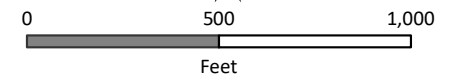
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

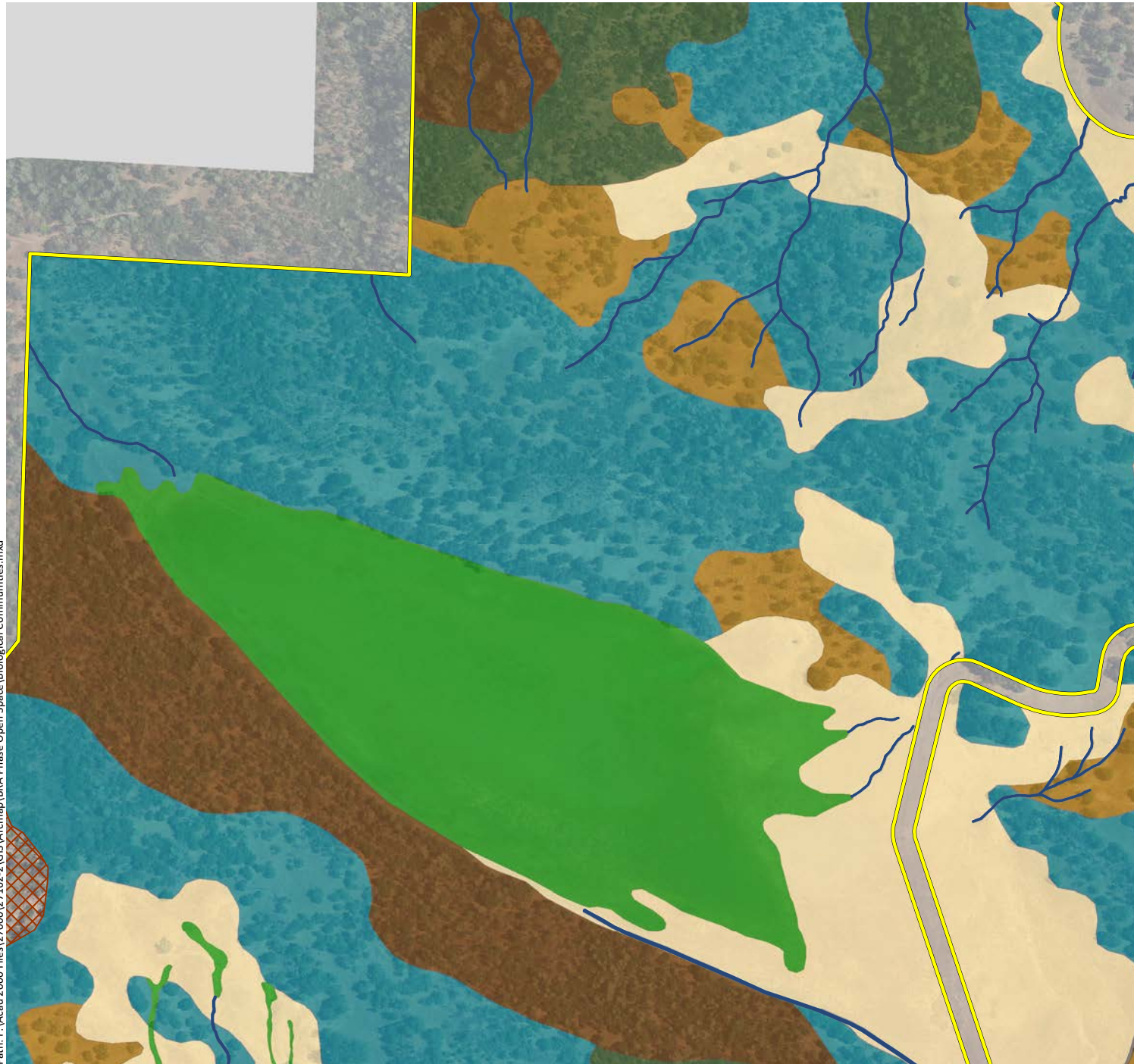
-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 5)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

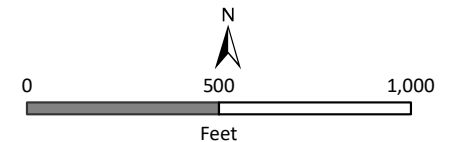
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

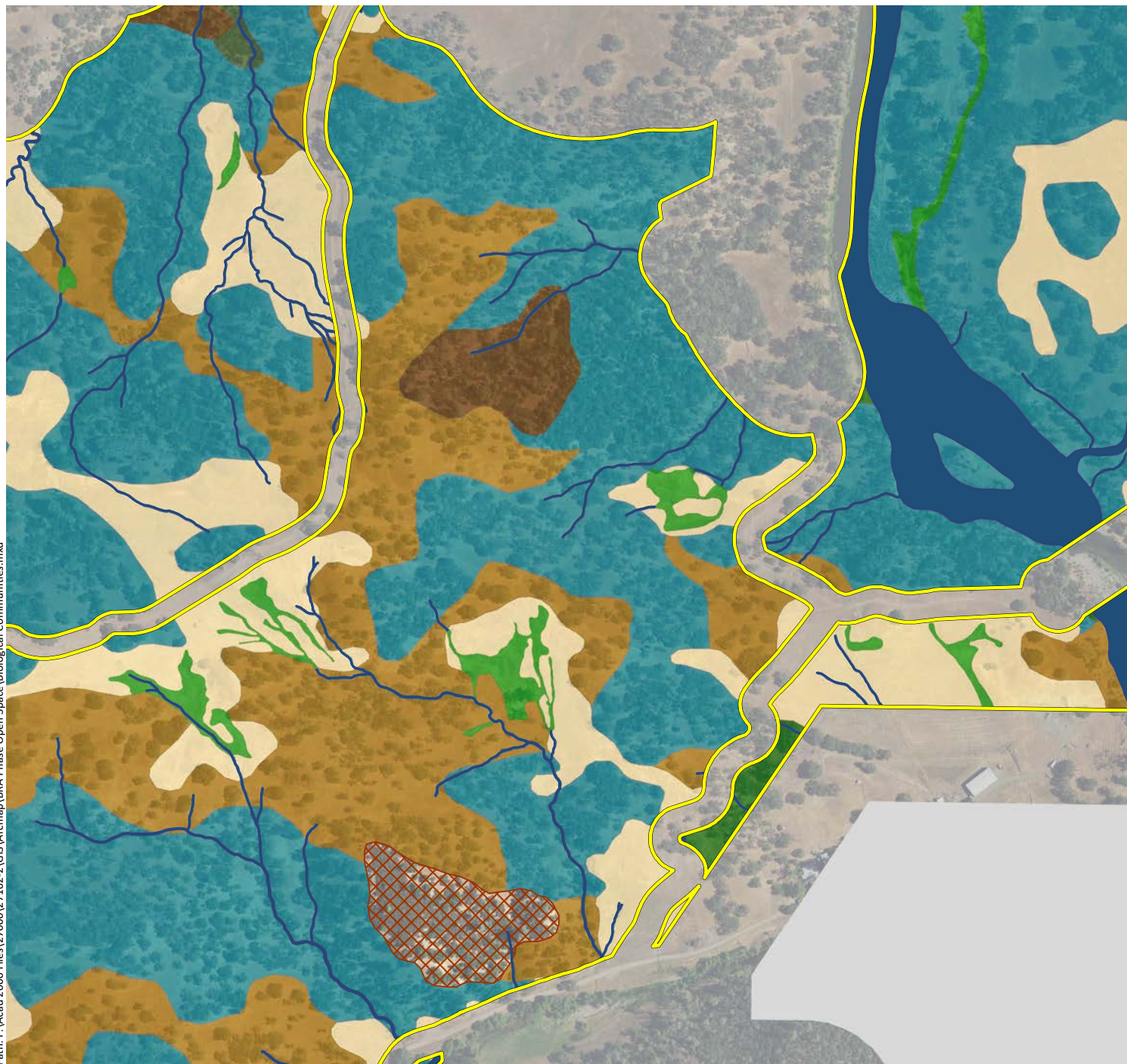
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 6)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

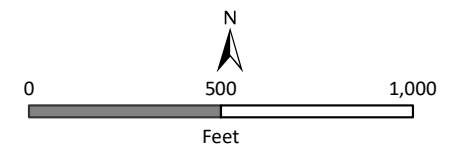
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 7)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

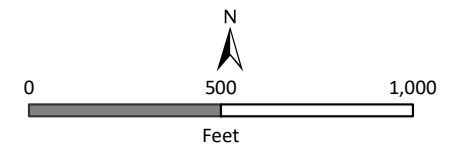
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

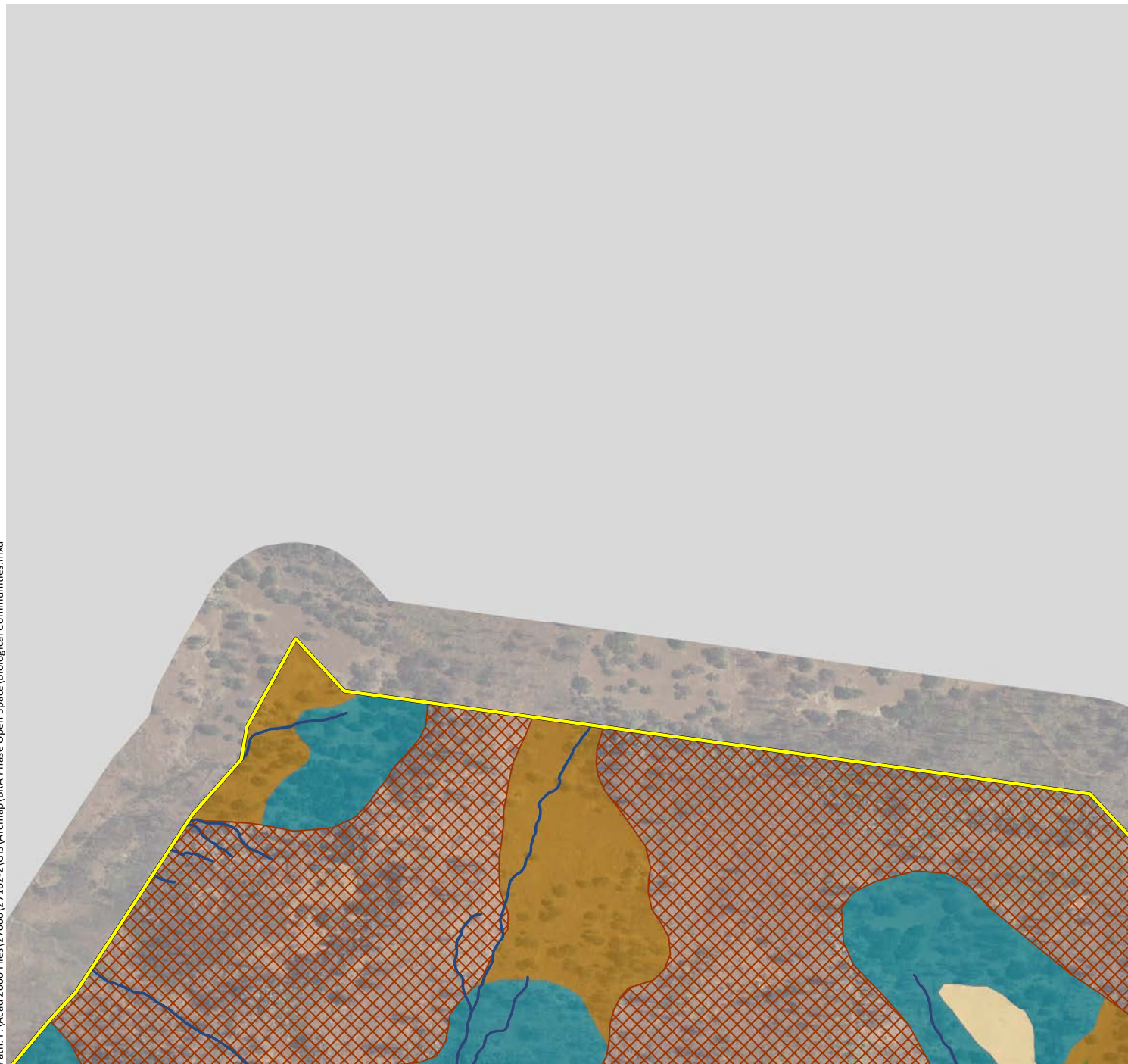
### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 8)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

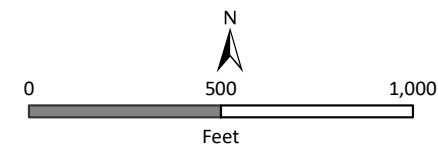
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

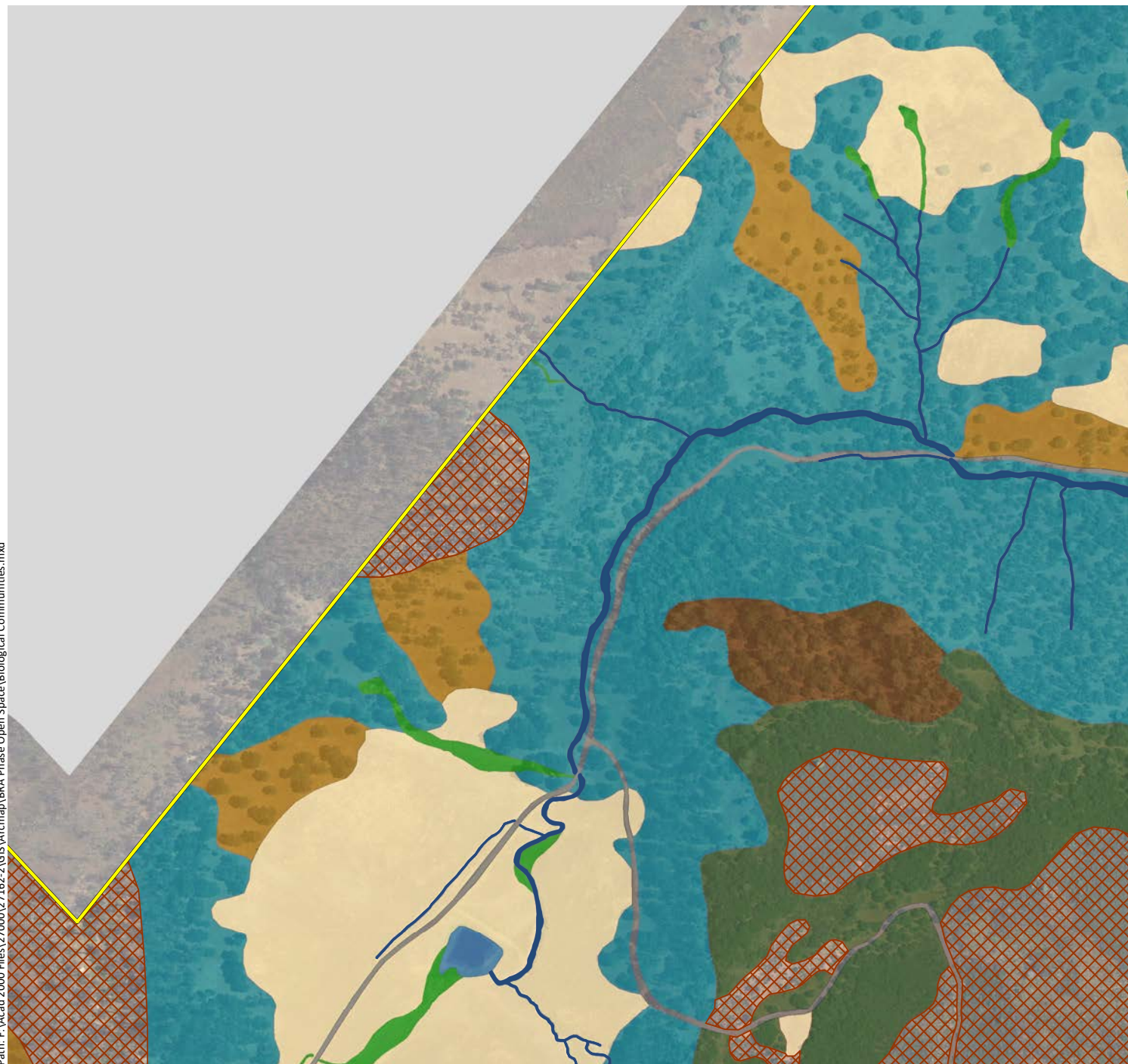
- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 9)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

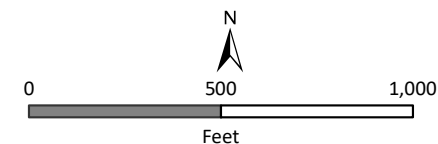
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

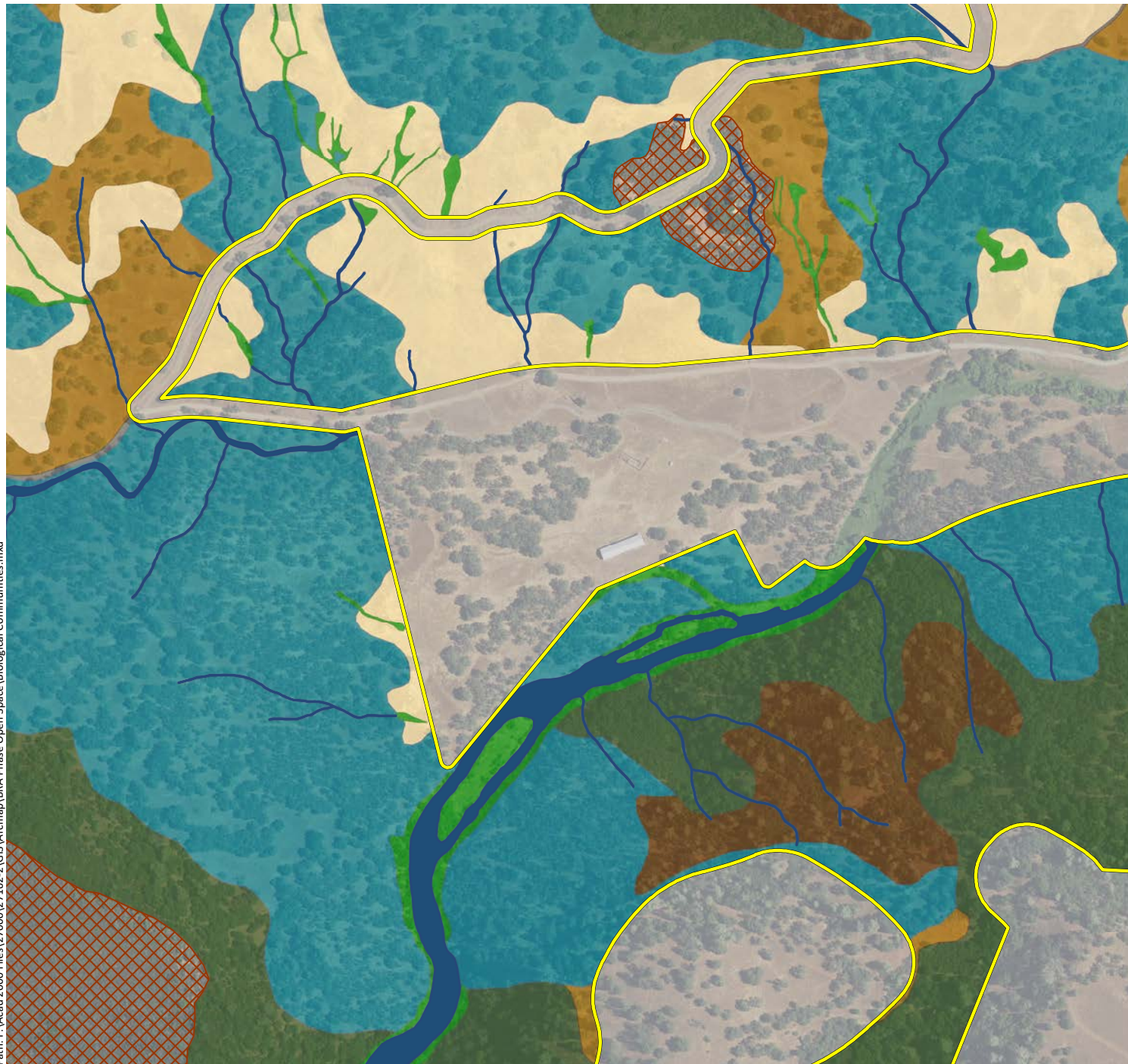
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 10)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

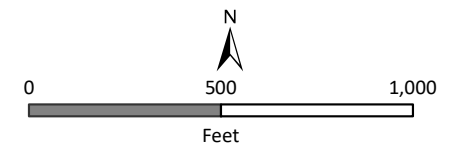
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

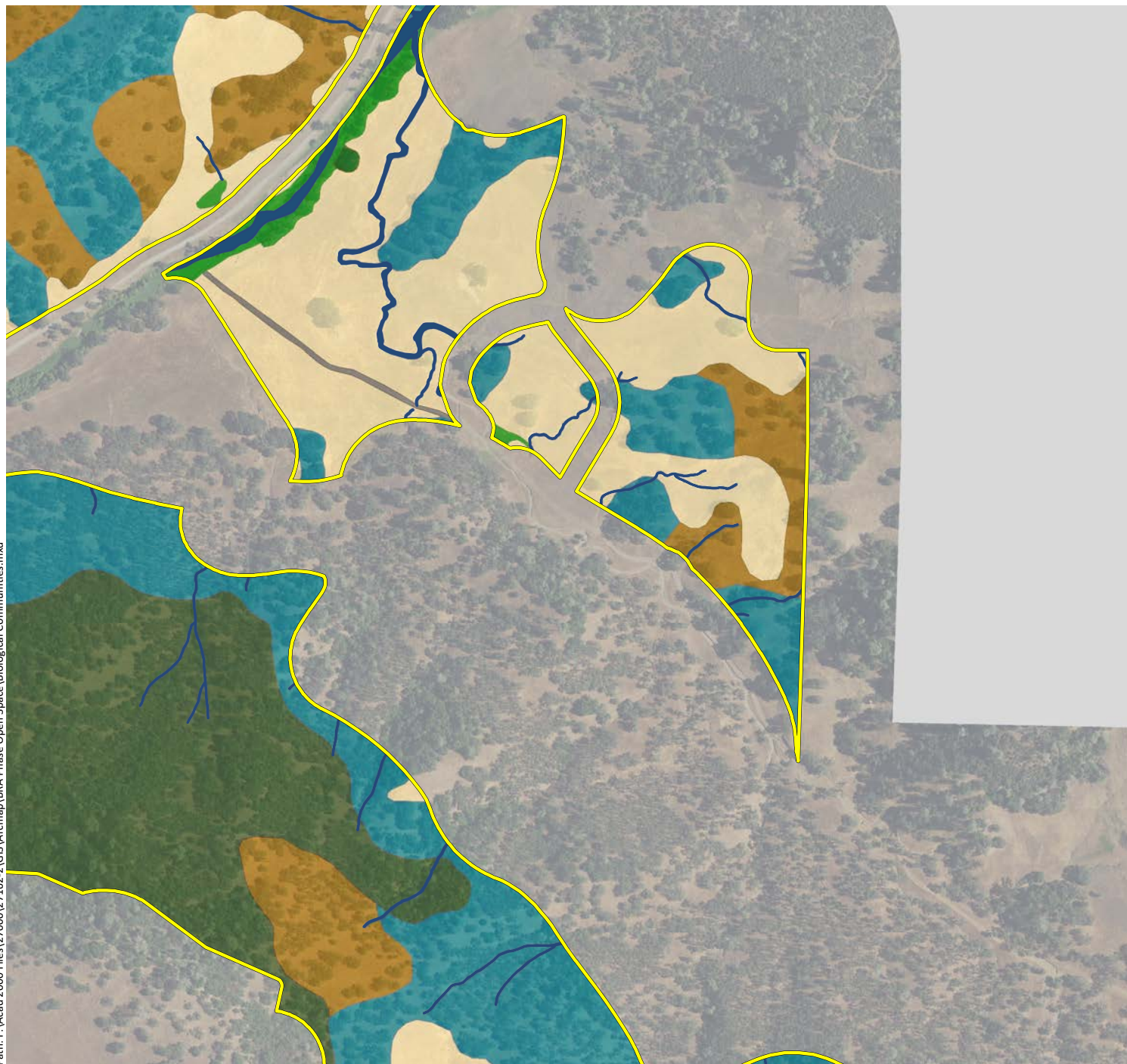
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



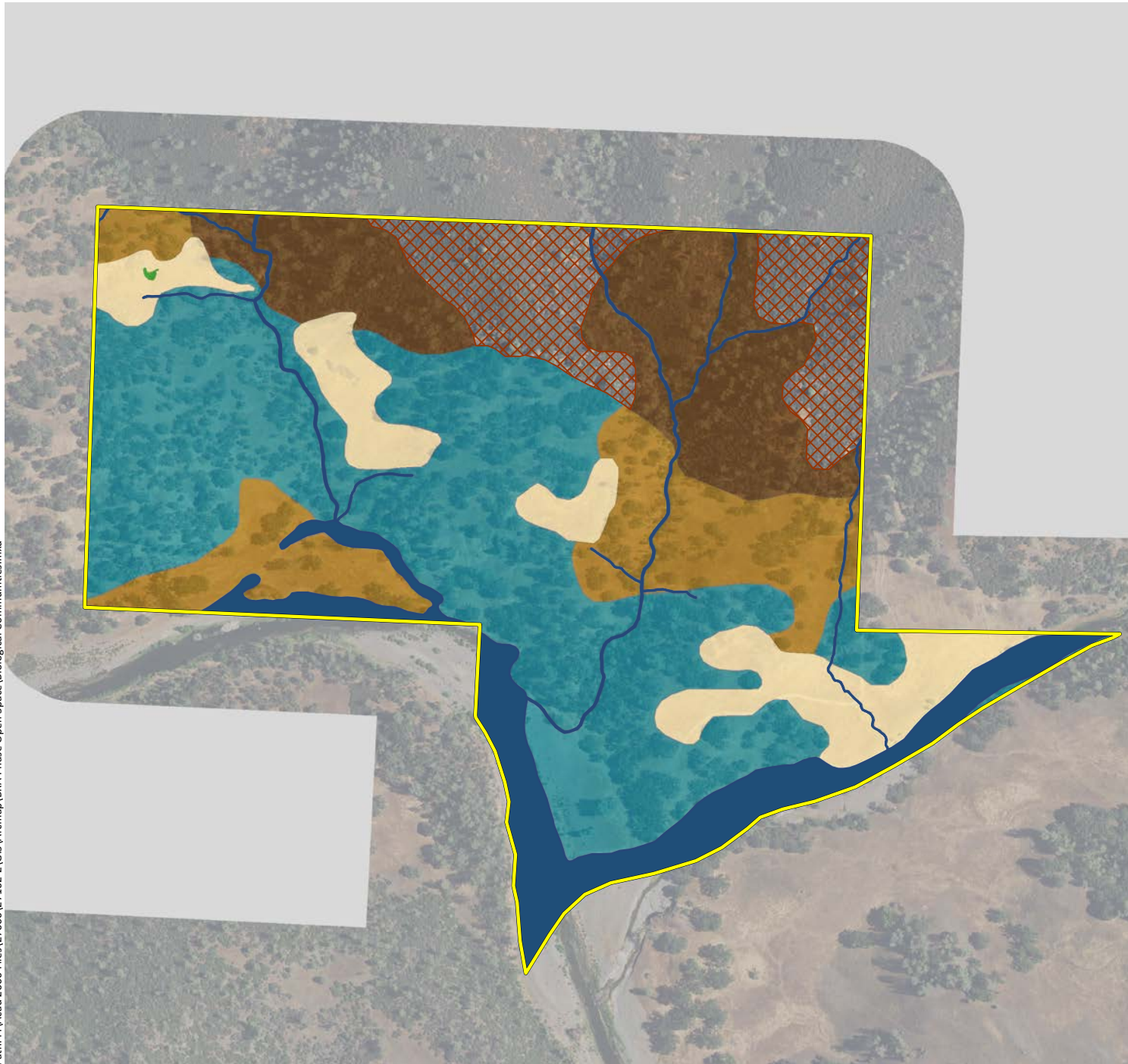
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Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 12)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

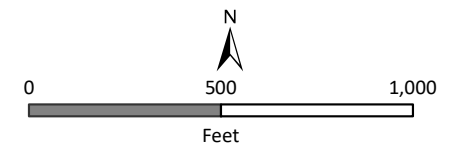
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

# **Appendix A.** **Biological Communities Mapped within** **the Phase 2 and Open Space Study Area** **(Mapbook Sheet 13)**

Maha Resort and Guenoc Valley  
 Development, Phase 2 and Open Space

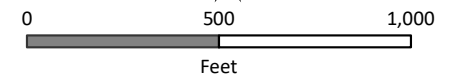
 Phase 2 & Open Space Study Area - 11,549 ac.

## **Sensitive Communities**

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

## **Non-Sensitive Communities**

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 14)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

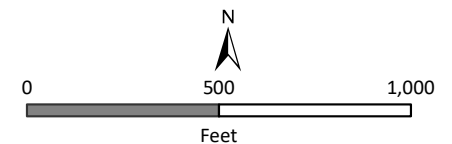
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

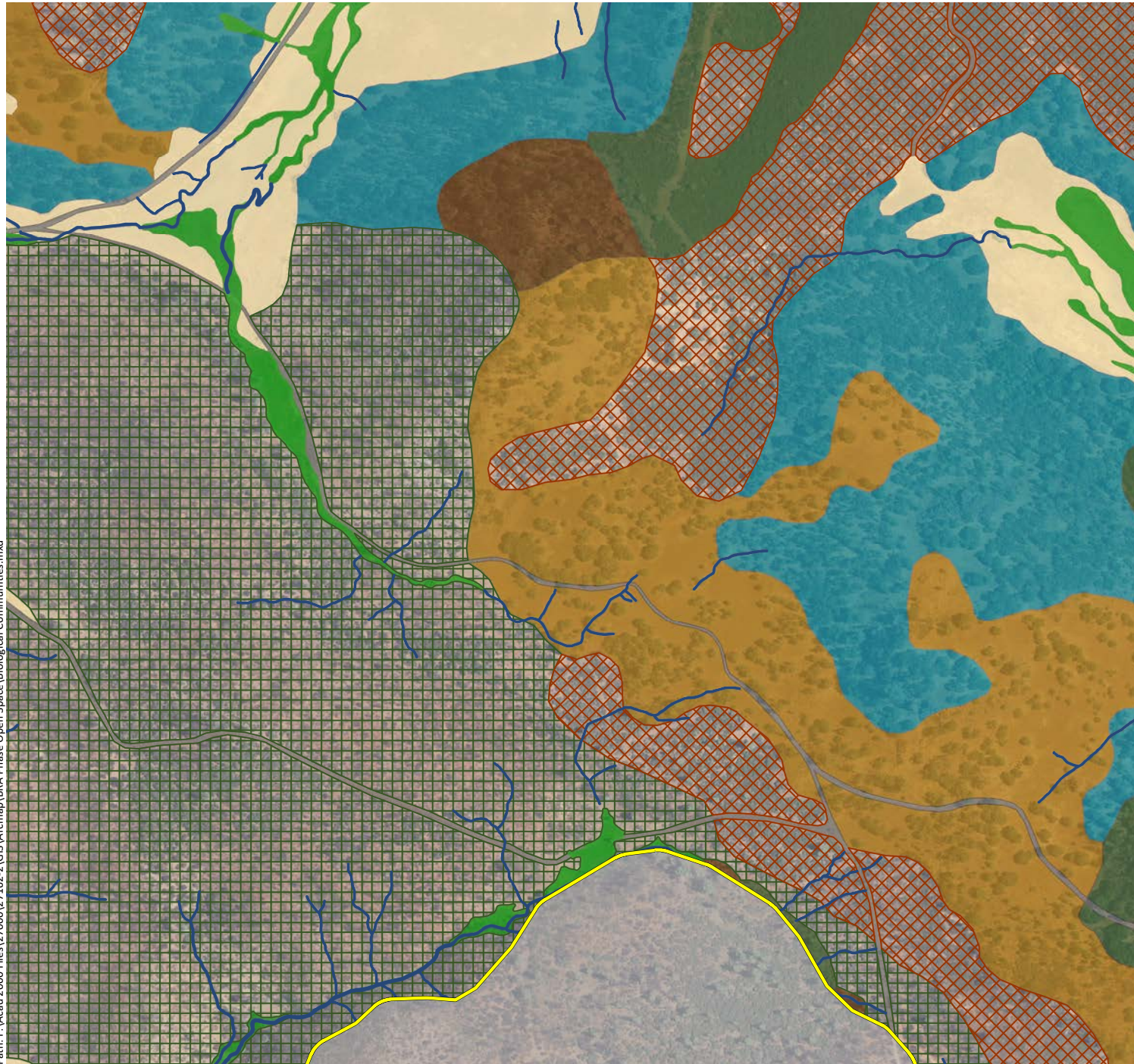
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 15)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

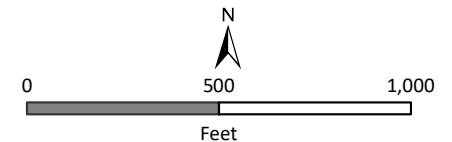
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 16)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

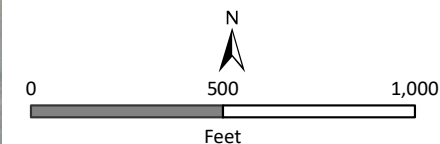
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

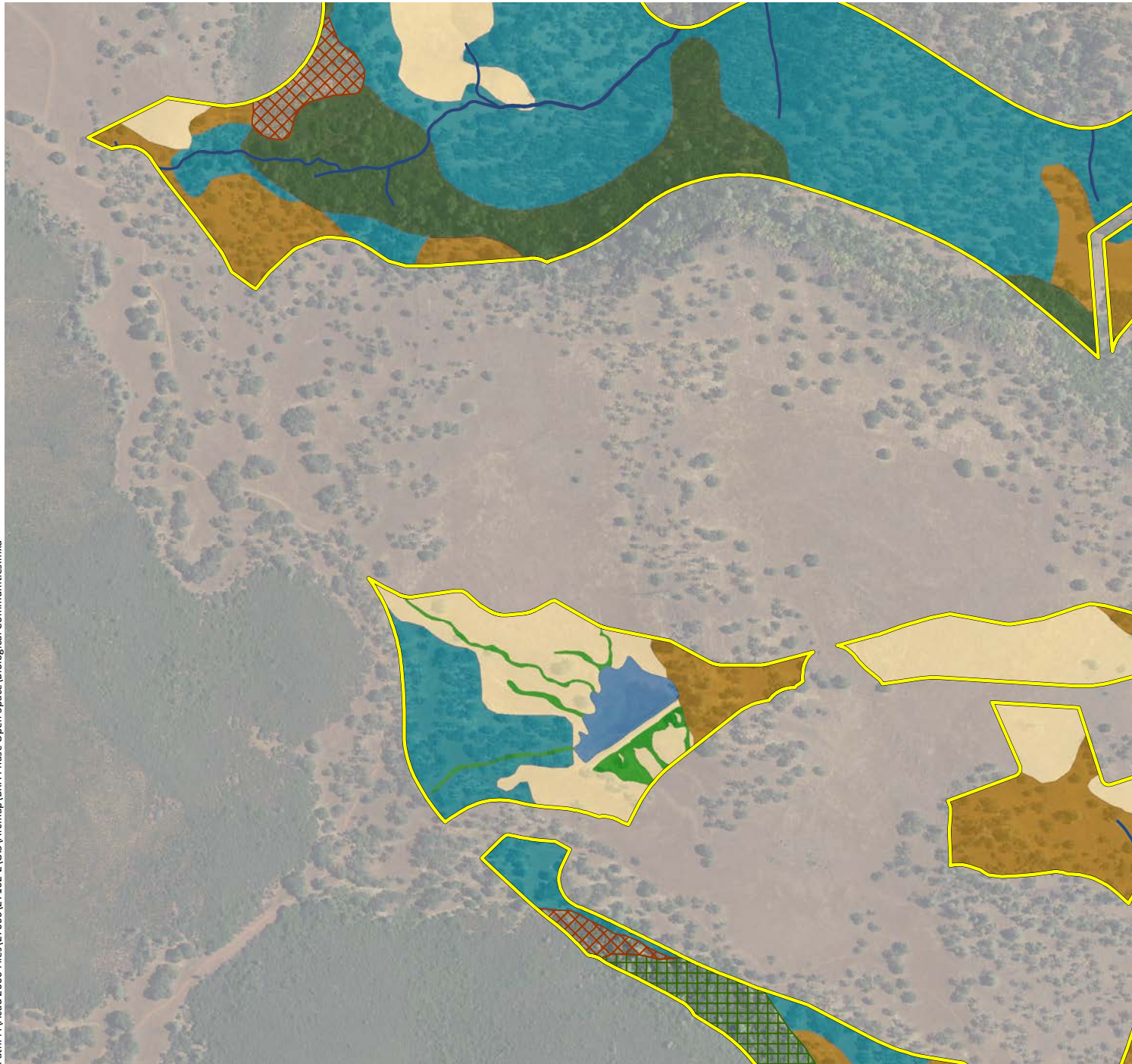
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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**Appendix A.**  
**Biological Communities Mapped within**  
**the Phase 2 and Open Space Study Area**  
**(Mapbook Sheet 17)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

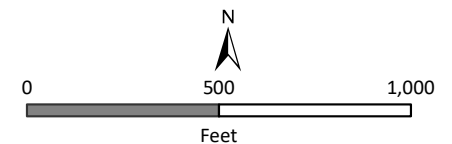
 Phase 2 & Open Space Study Area - 11,549 ac.

**Sensitive Communities**

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

**Non-Sensitive Communities**

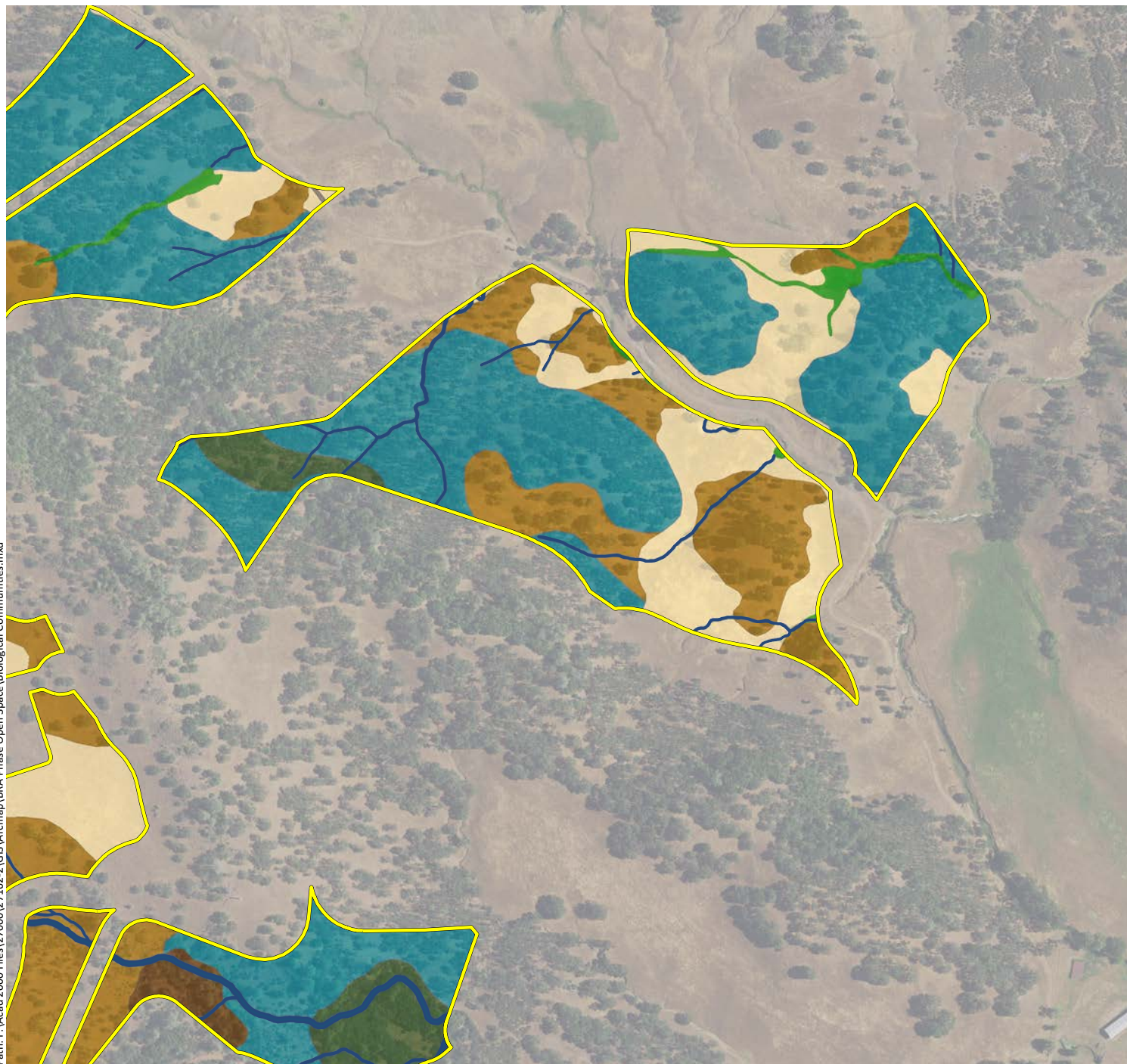
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 18)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

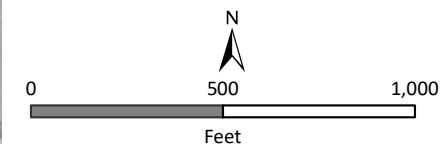
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 19)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

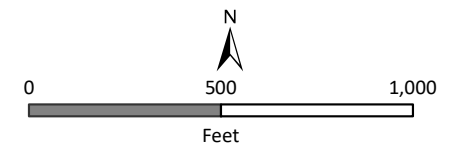
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 20)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

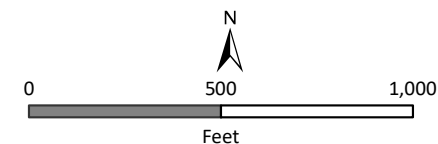
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 21)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

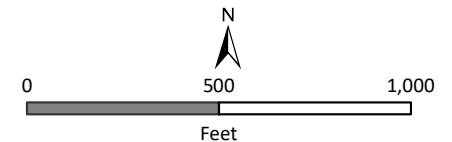
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

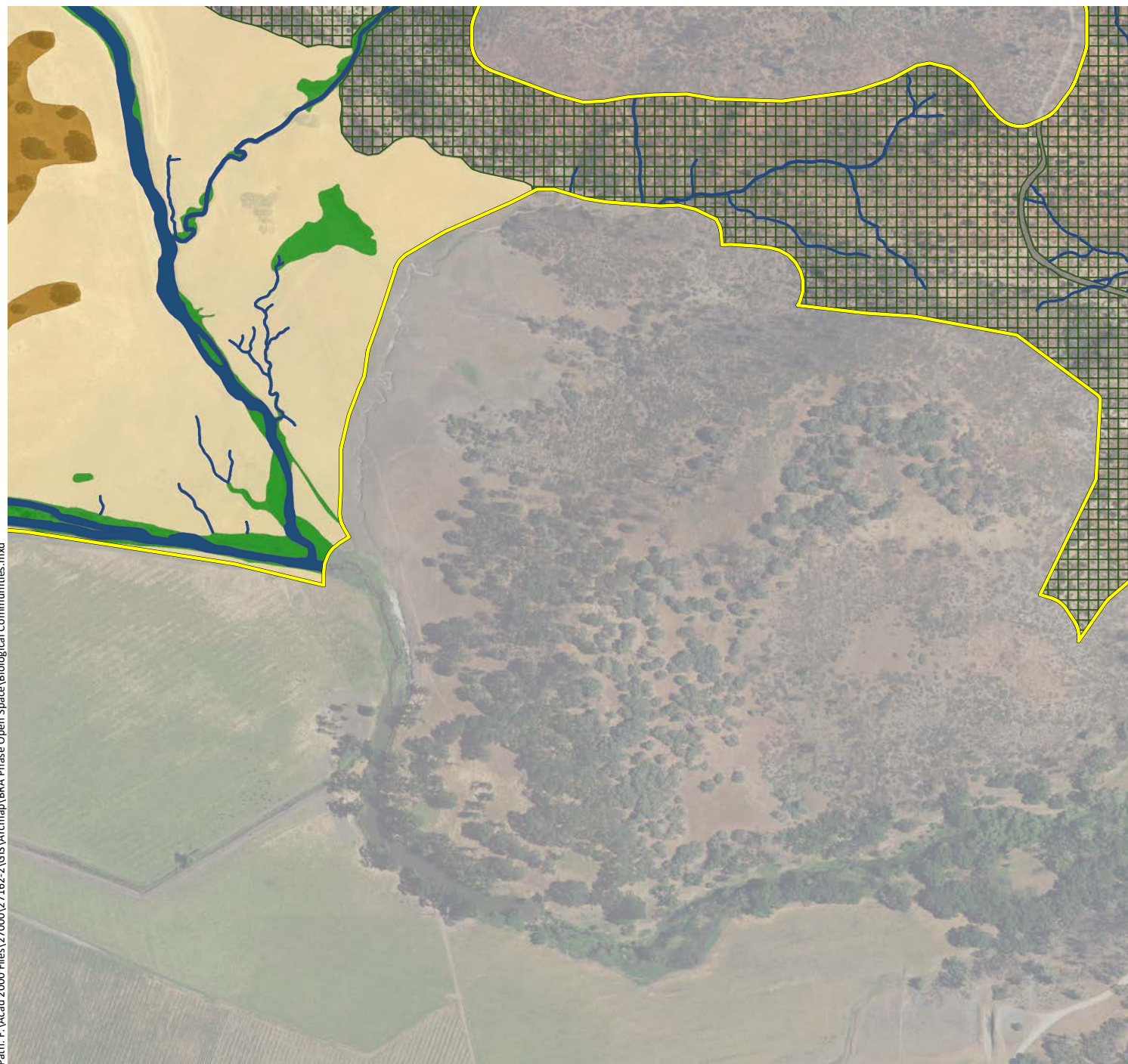
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 22)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

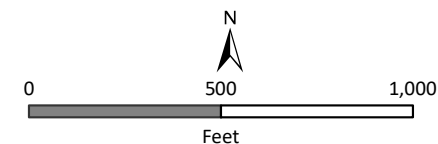
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

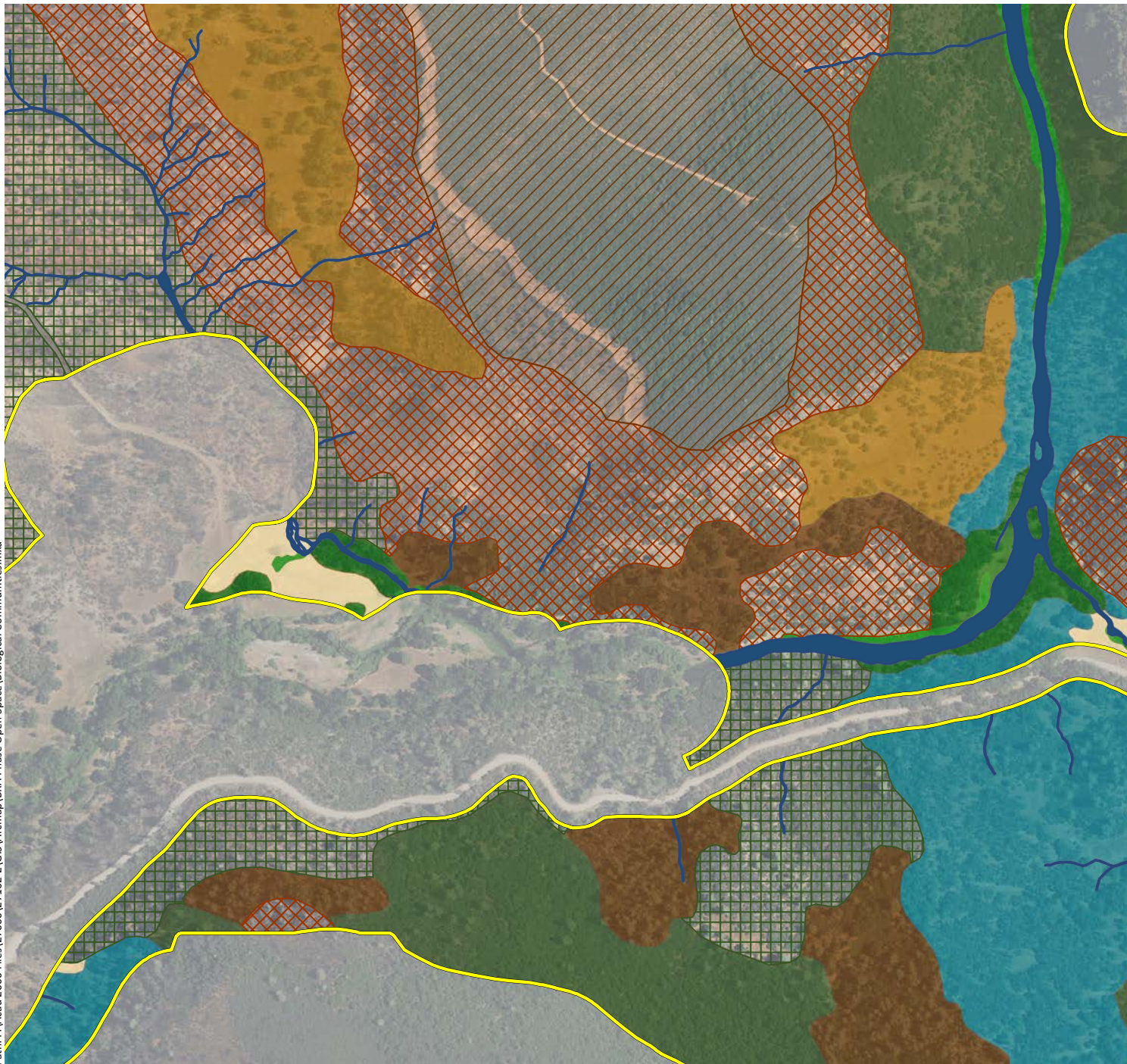
### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 23)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

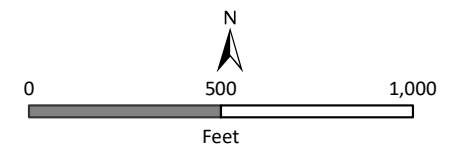
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

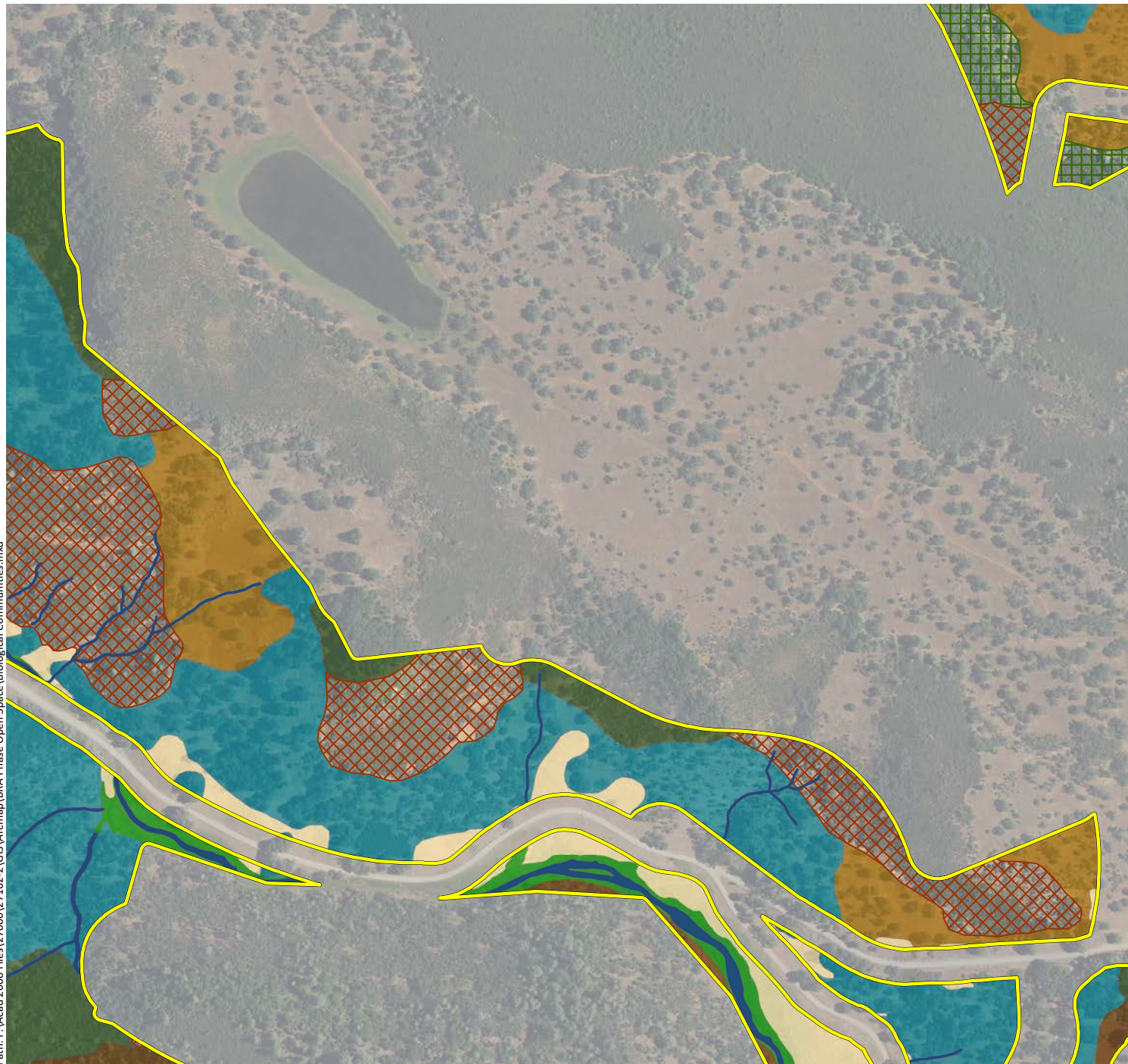
### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 24)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

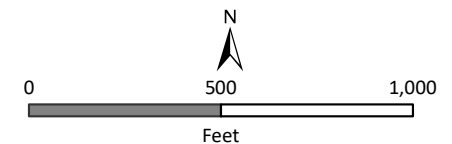
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

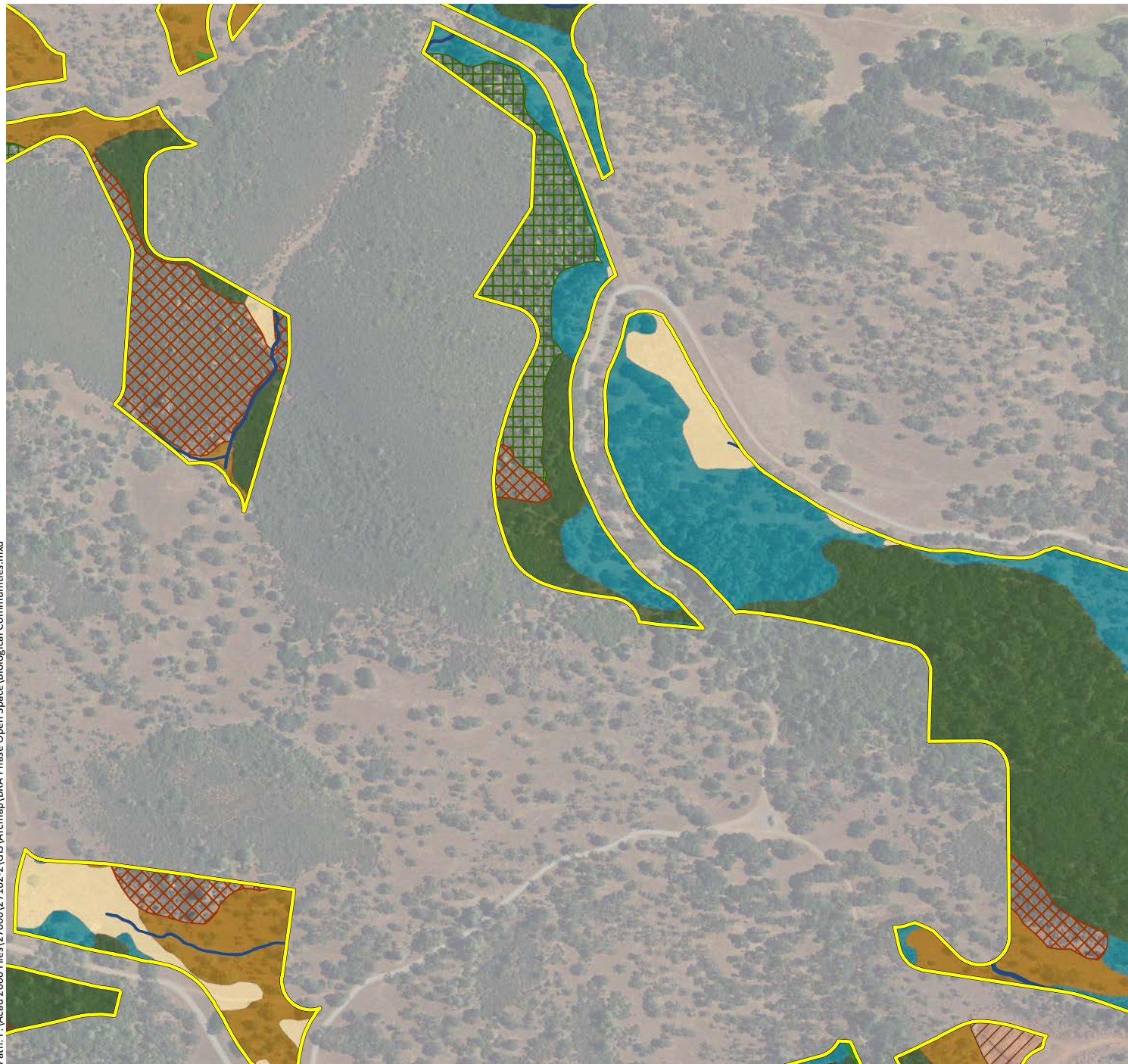
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 25)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

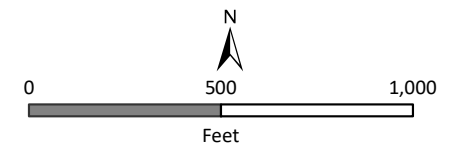
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

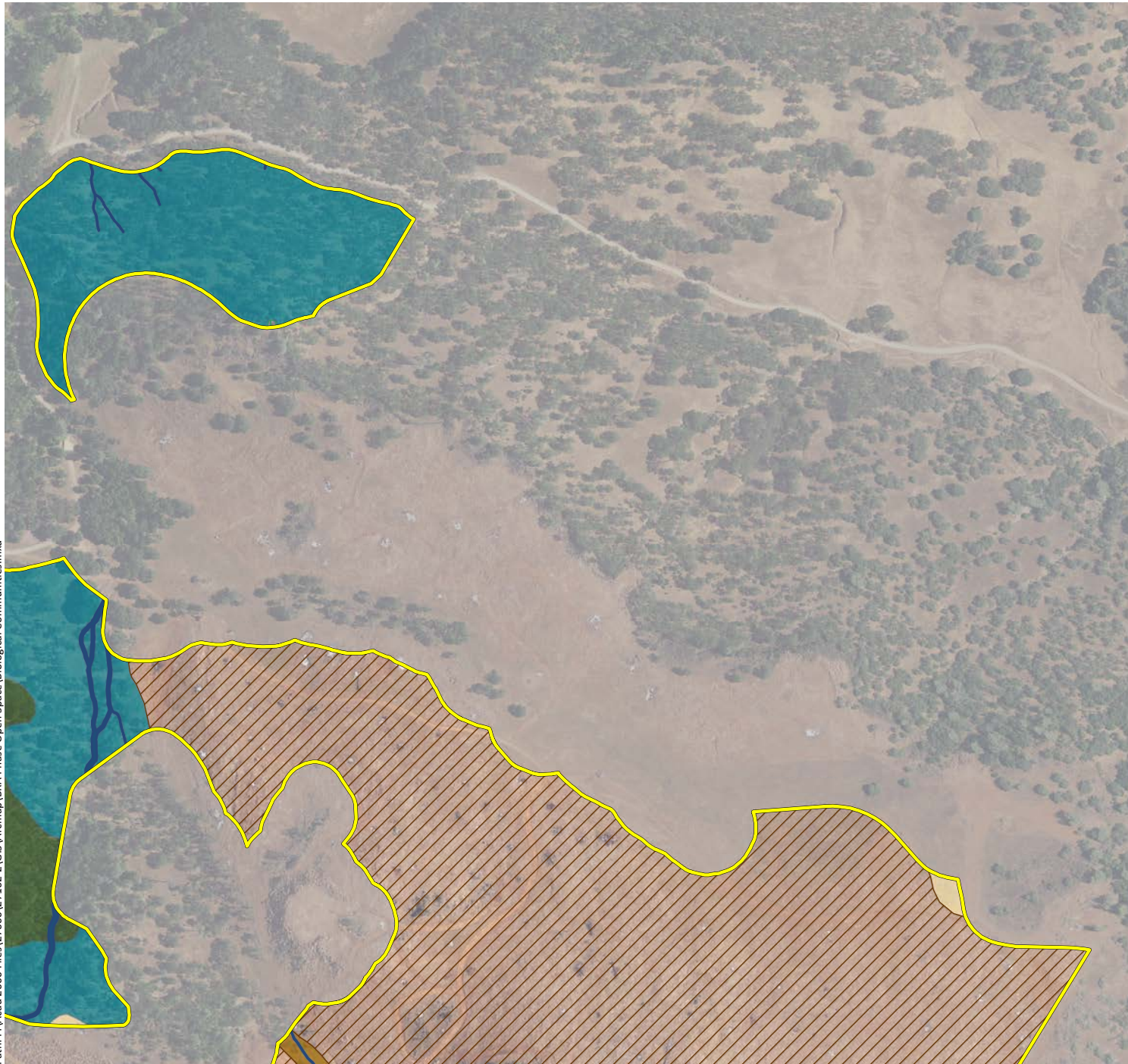
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 26)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

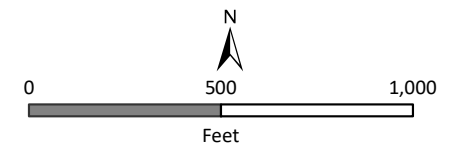
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

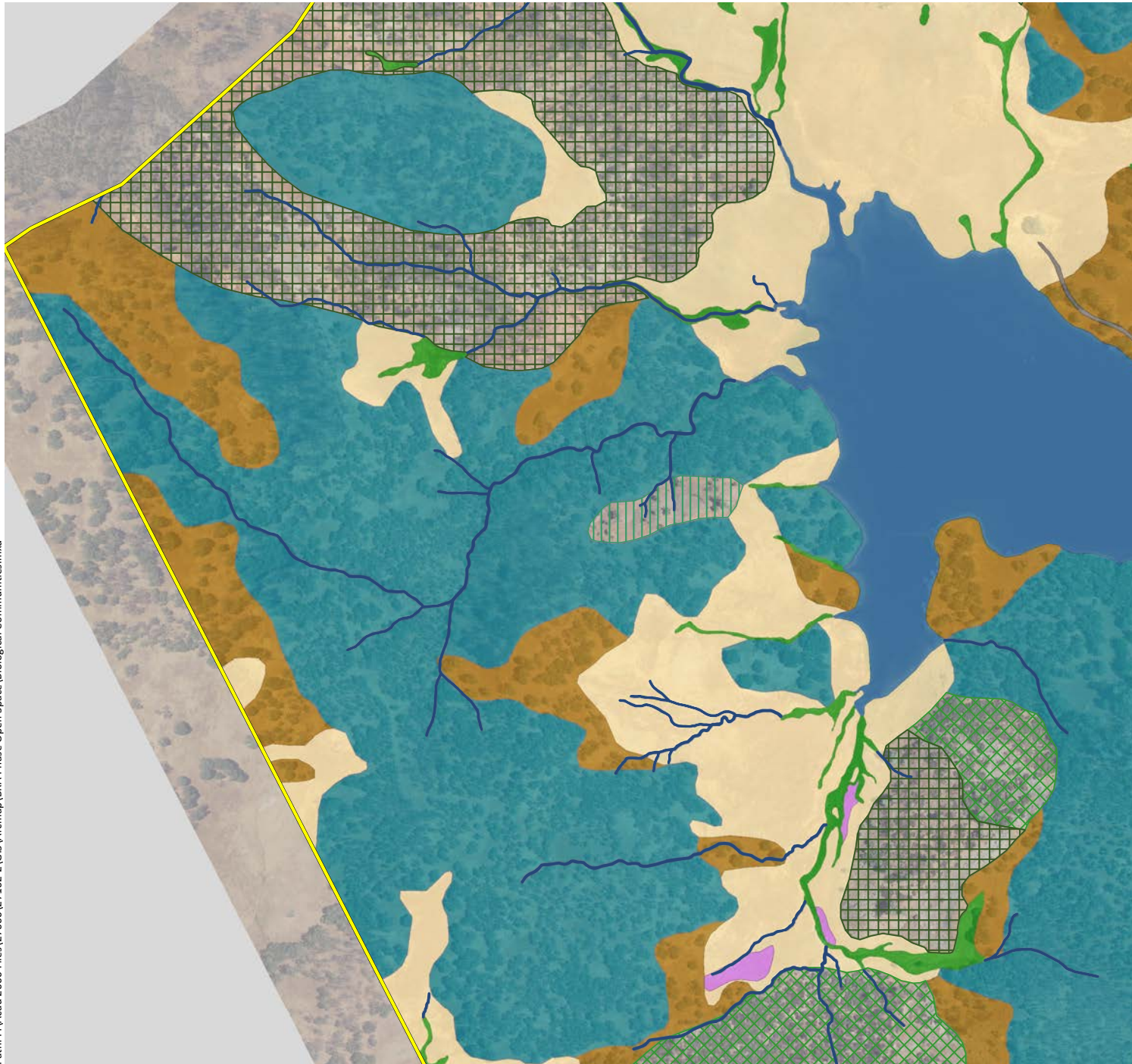
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 27)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

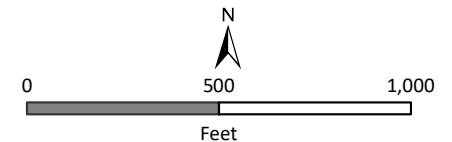
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 28)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

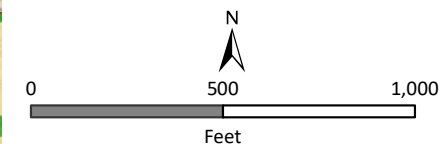
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 29)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

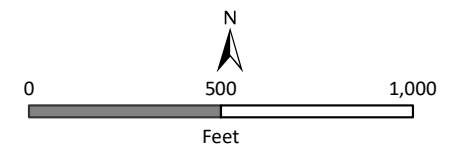
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

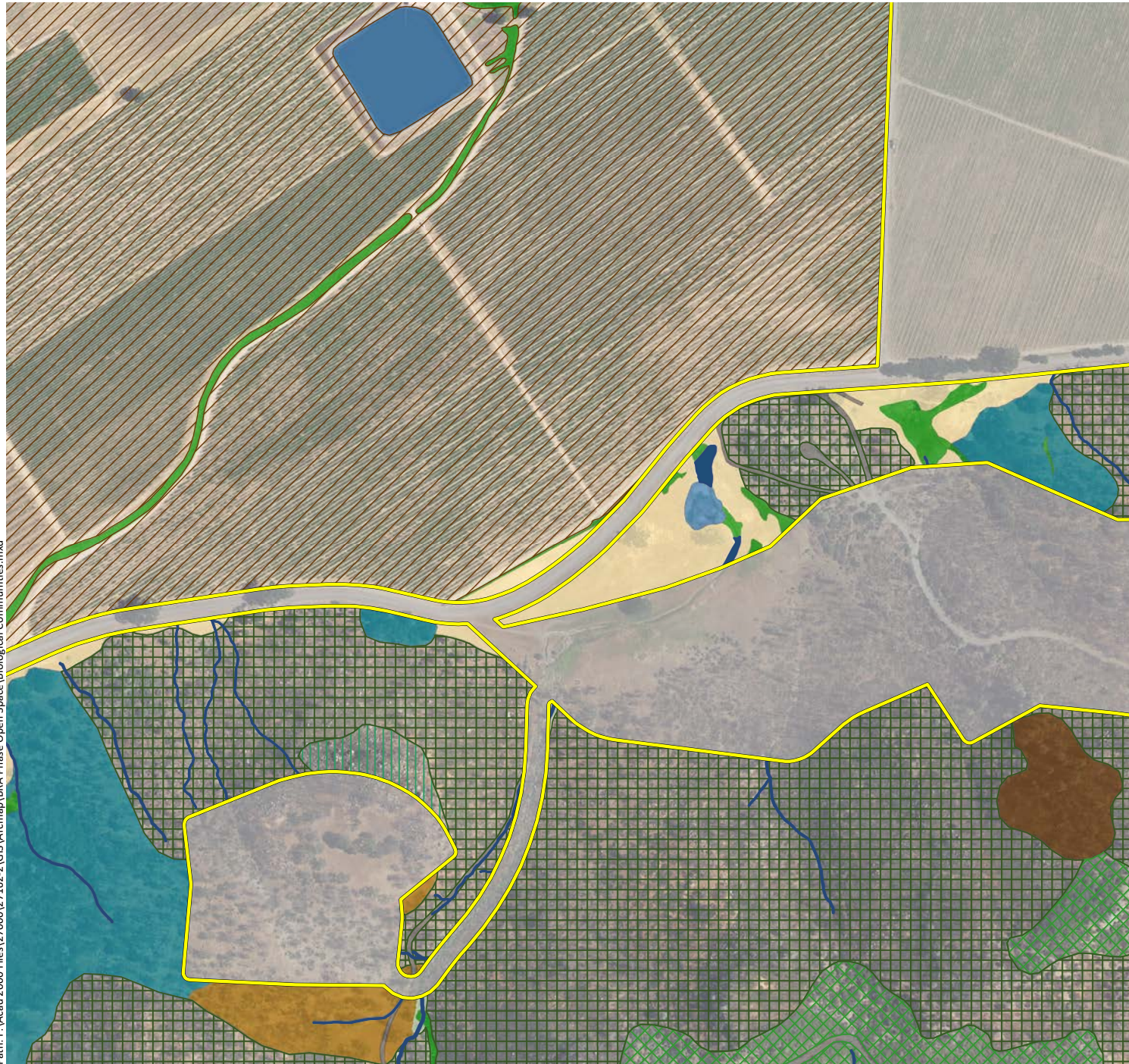
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 30)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

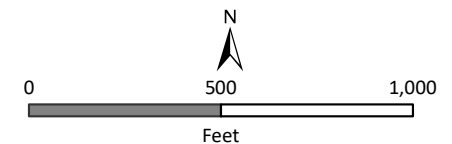
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

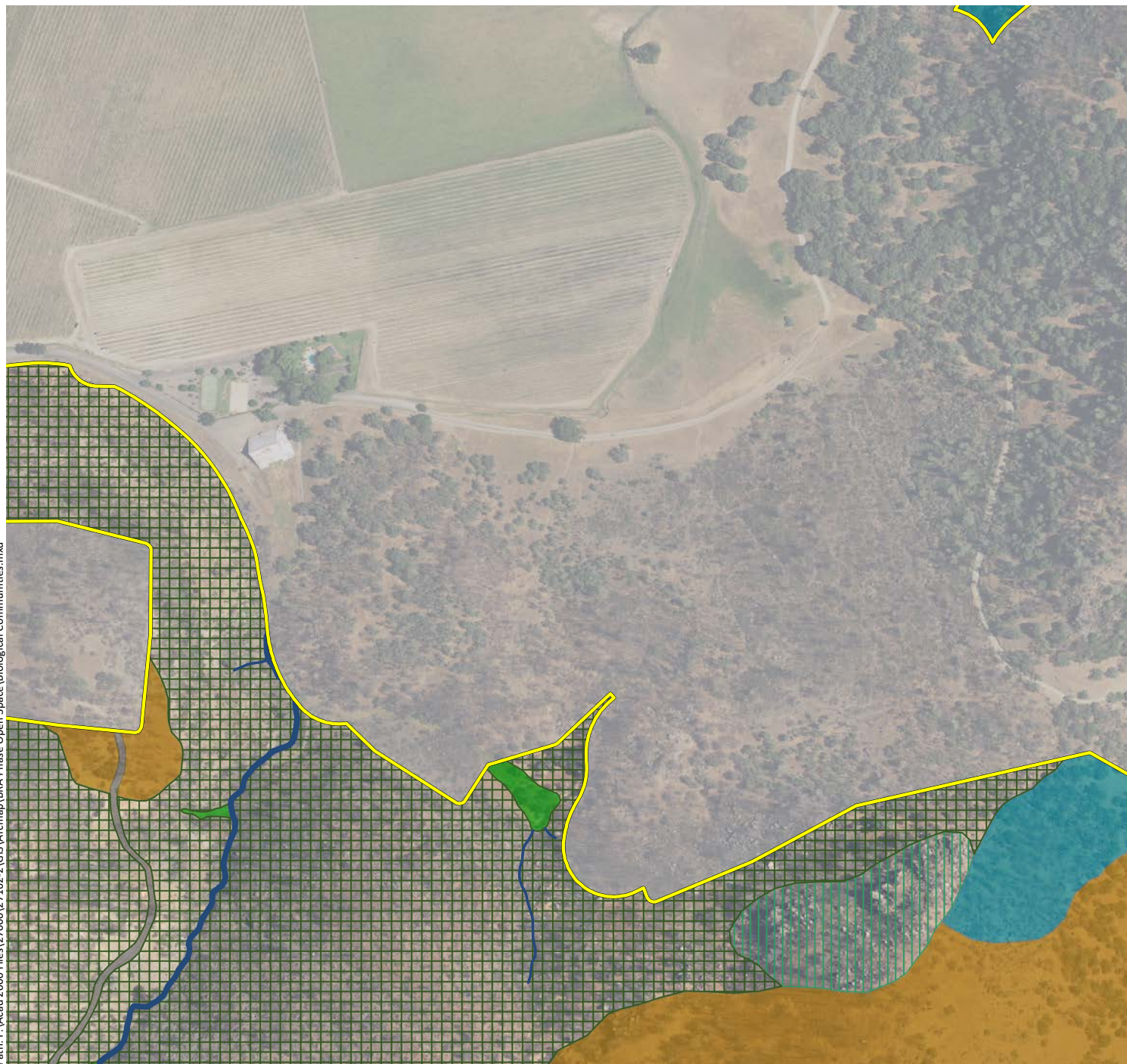
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 31)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

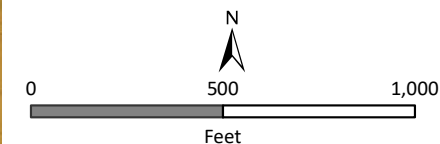
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 32)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

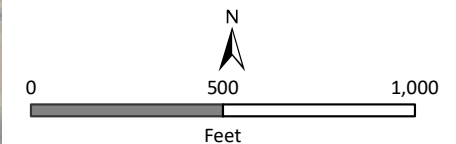
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
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-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 33)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

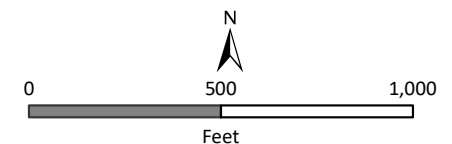
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

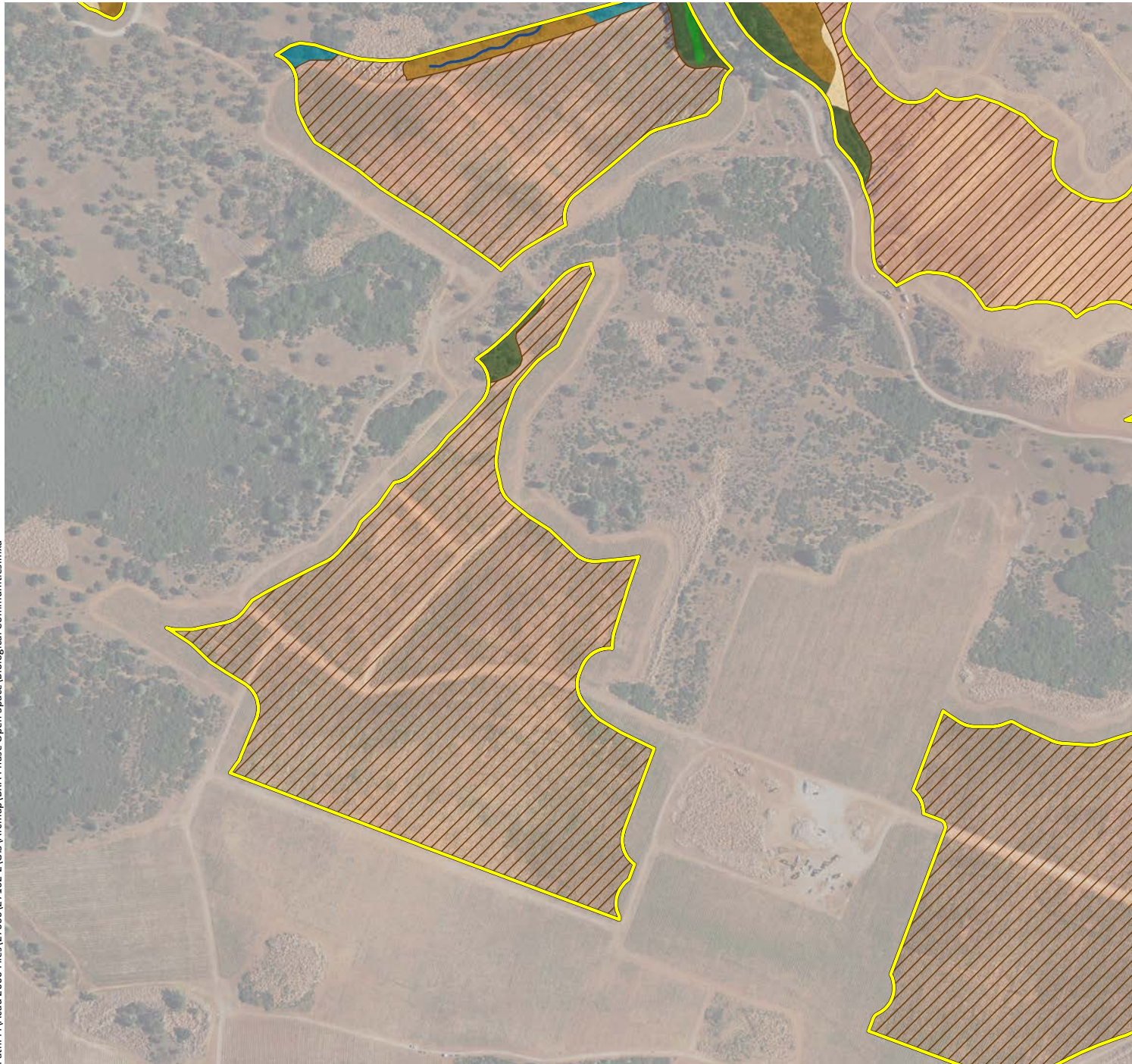
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 34)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

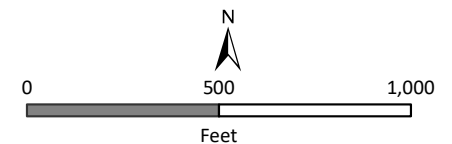
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

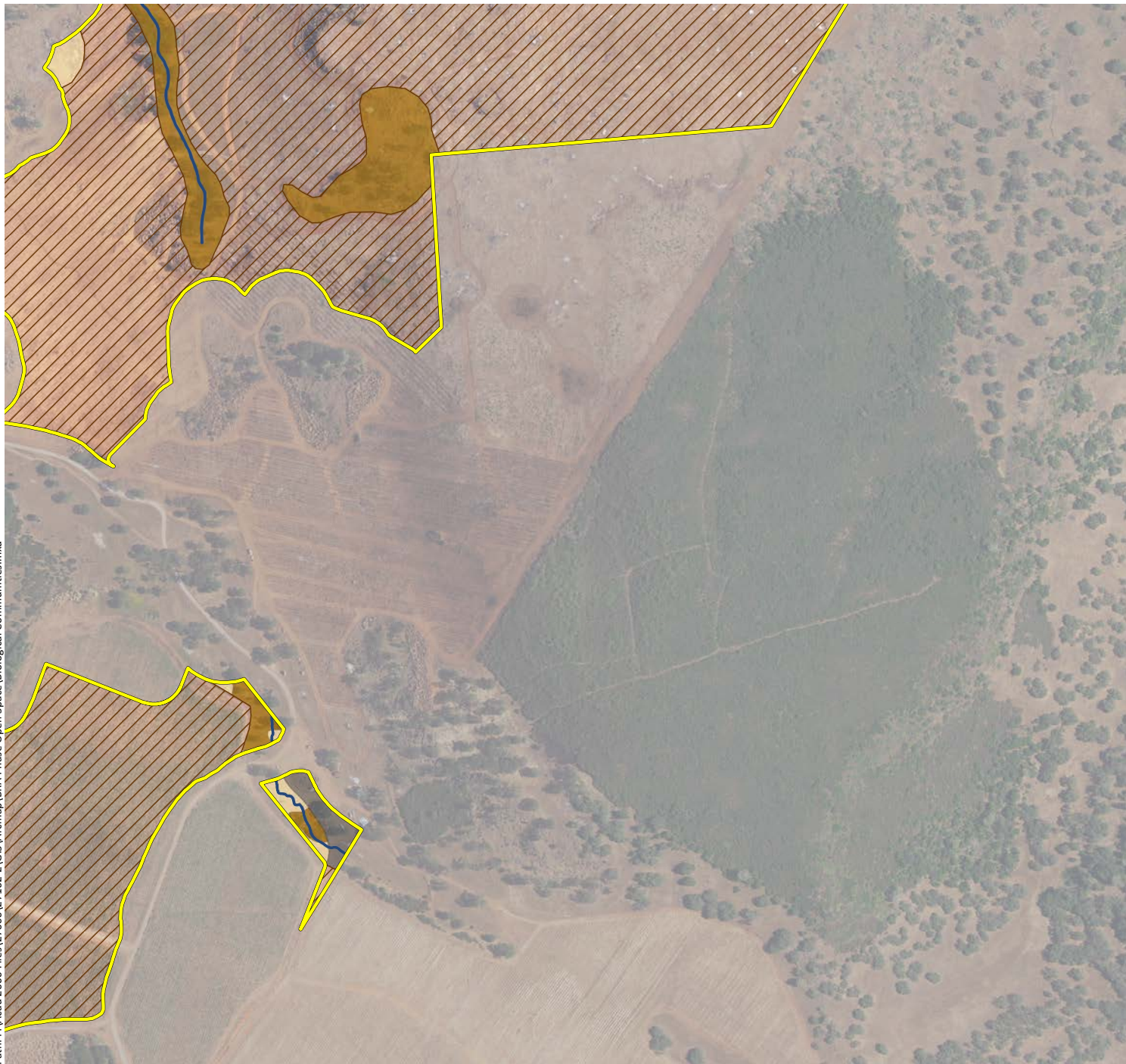
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 35)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

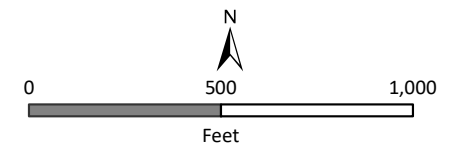
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

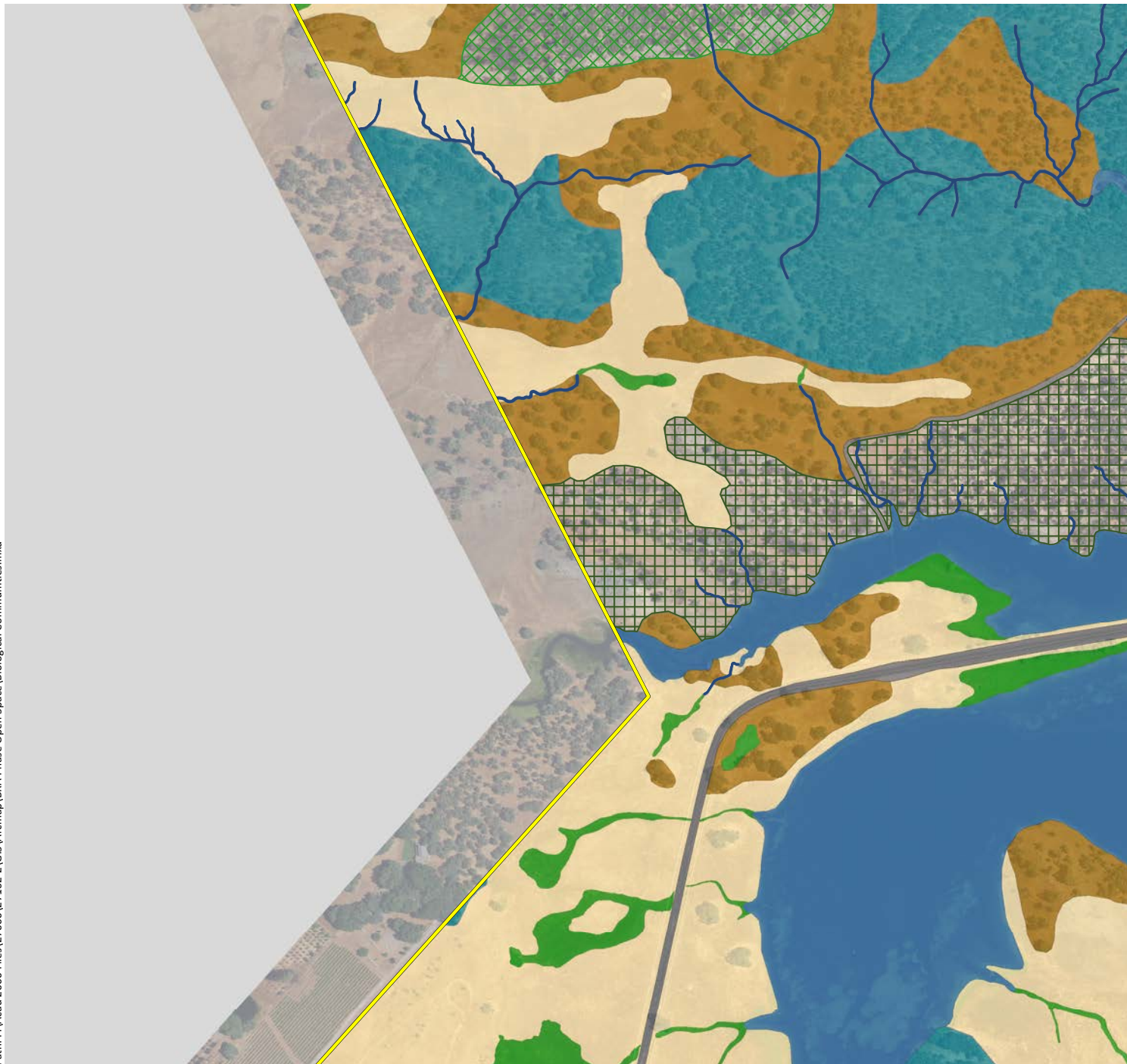
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 36)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

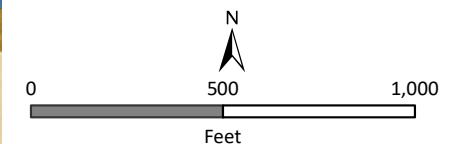
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
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-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

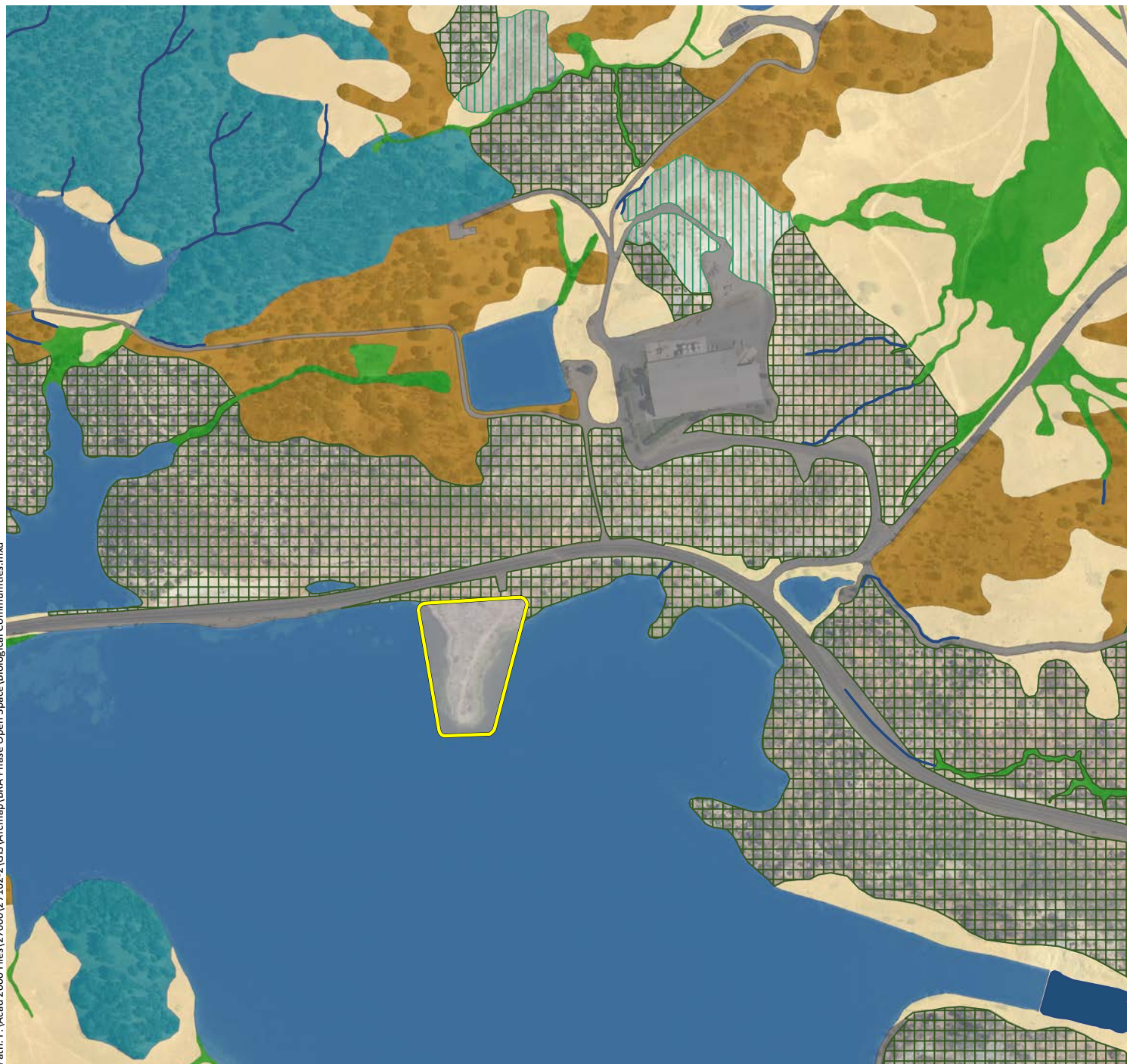
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 37)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

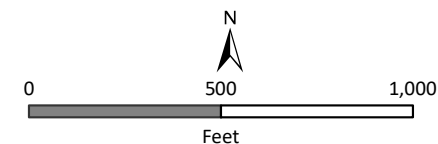
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
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-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
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-  California Yerba Santa Scrub - 30.2 ac.
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-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 38)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

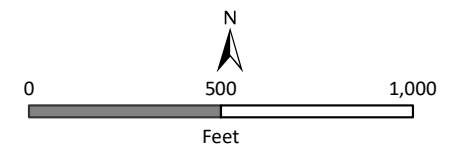
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
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- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

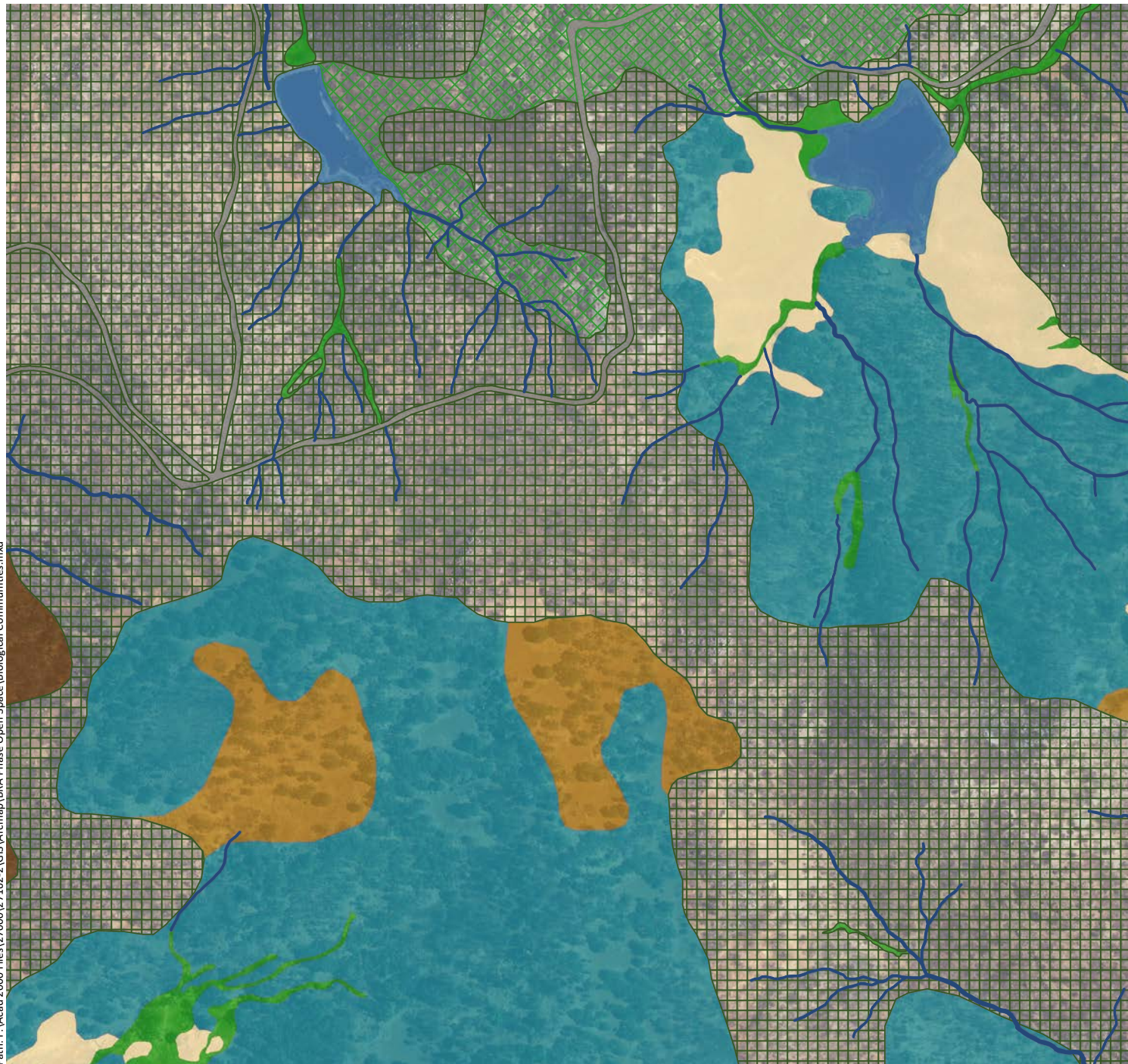
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 39)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

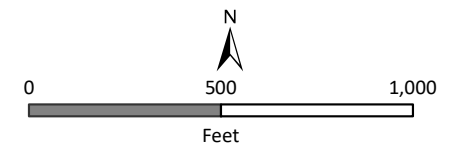
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
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- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

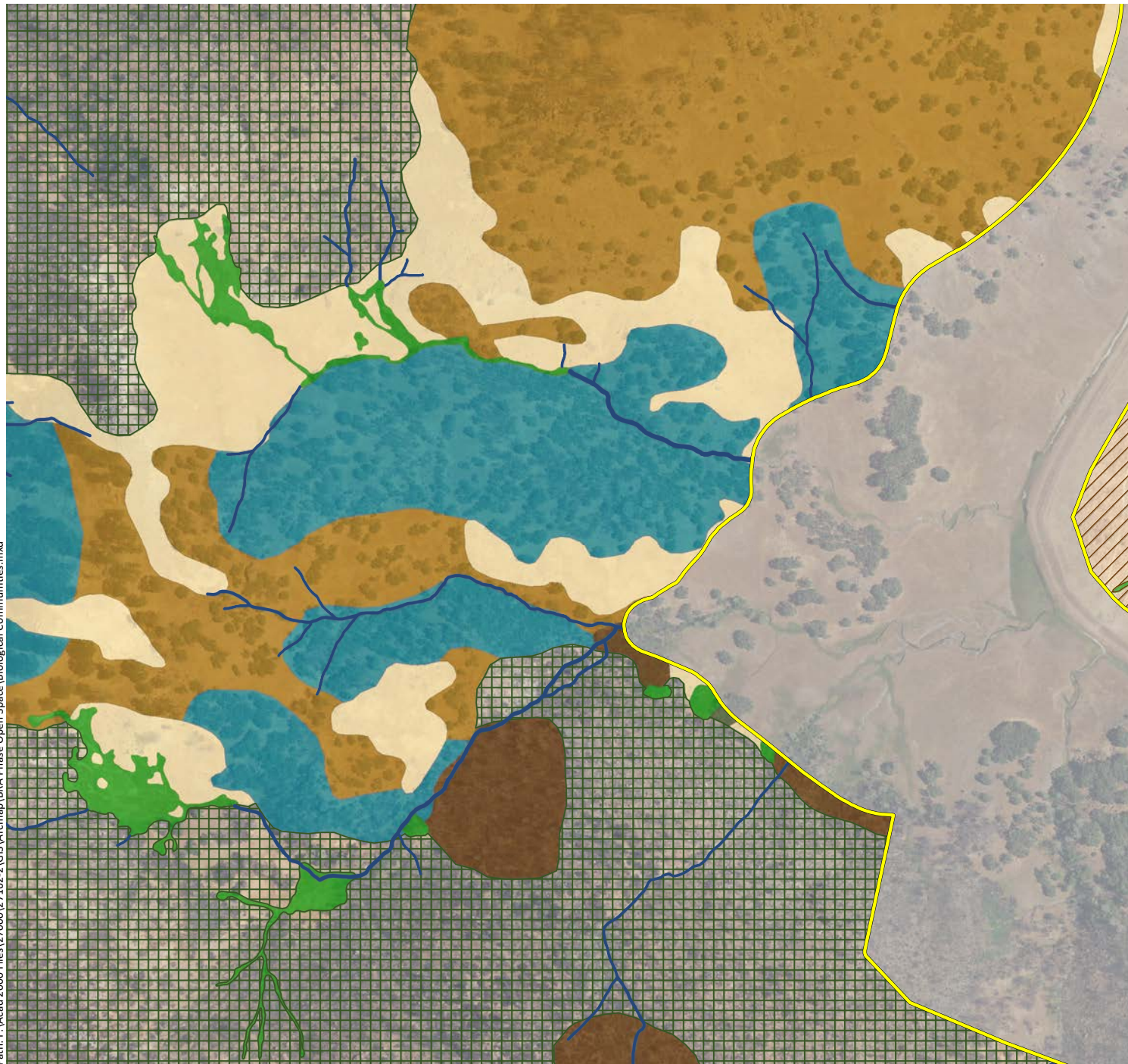
### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
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- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 40)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

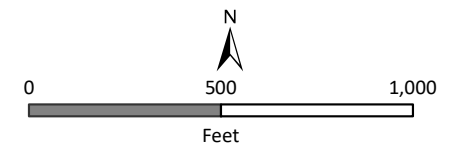
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 41)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

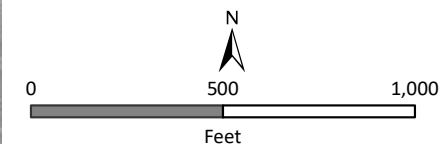
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 42)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

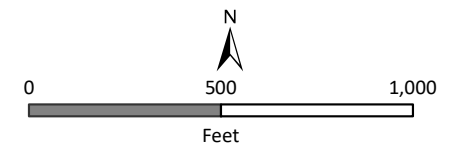
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

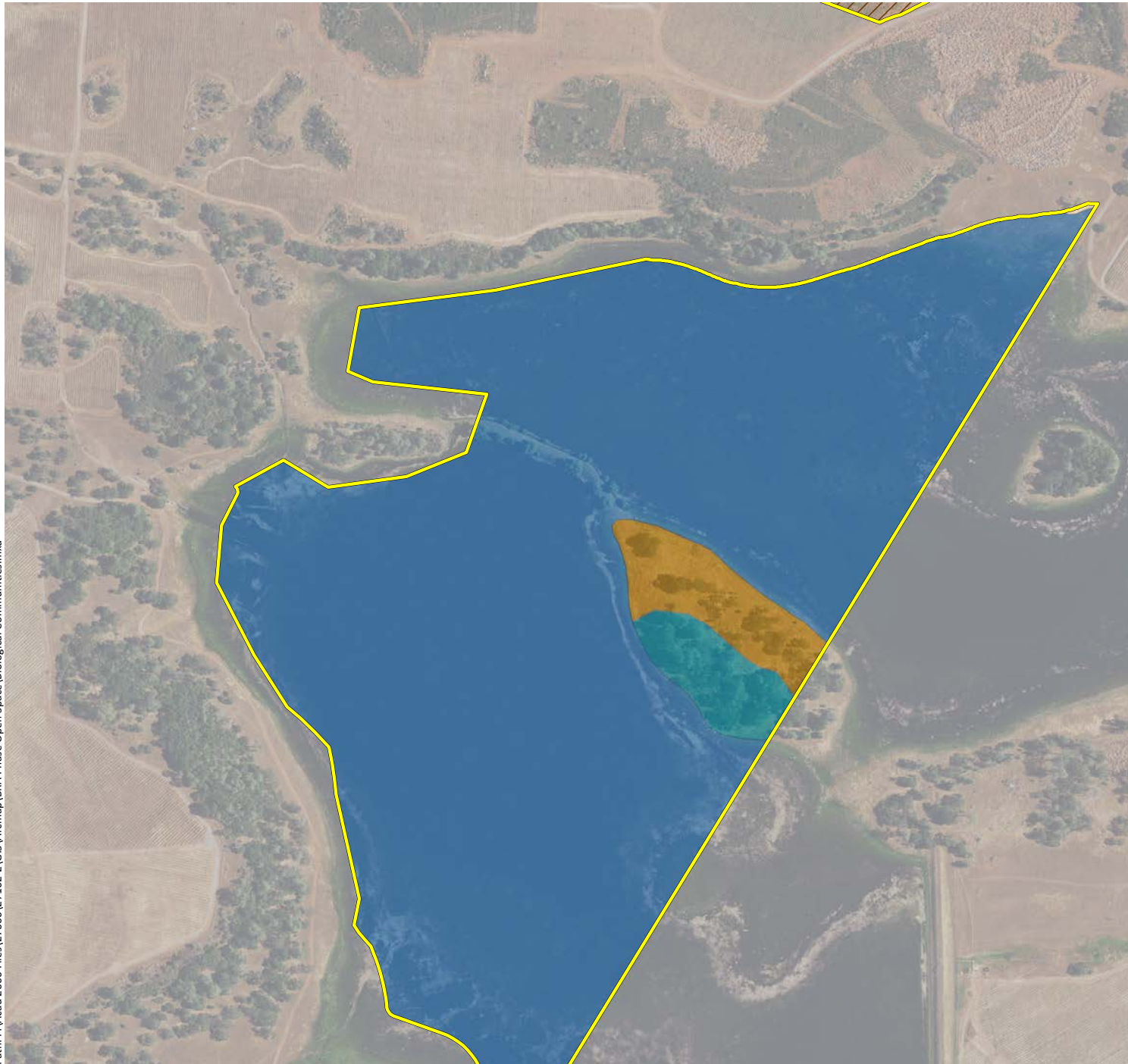
### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 43)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

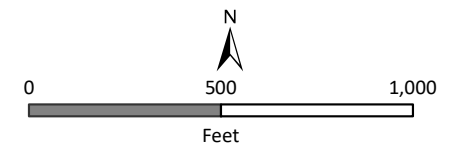
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 44)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

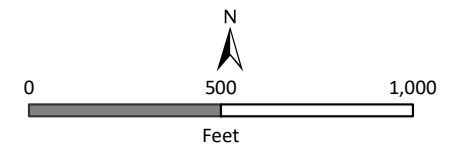
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 45)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

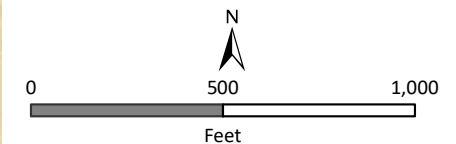
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

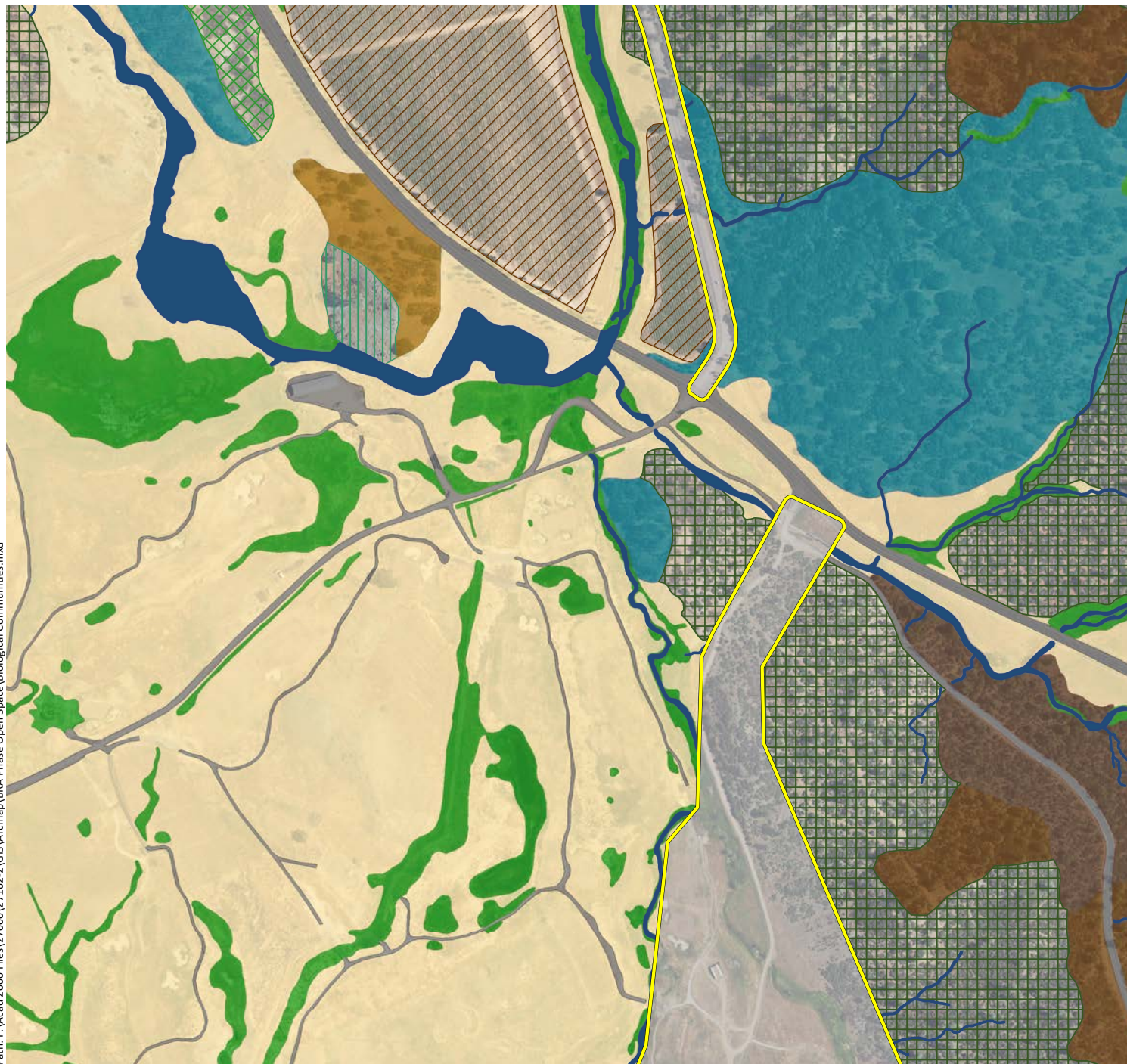
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 46)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

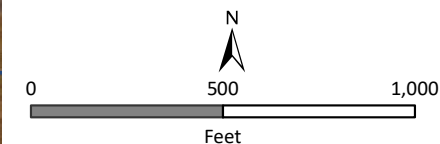
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 47)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

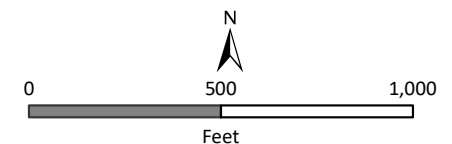
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

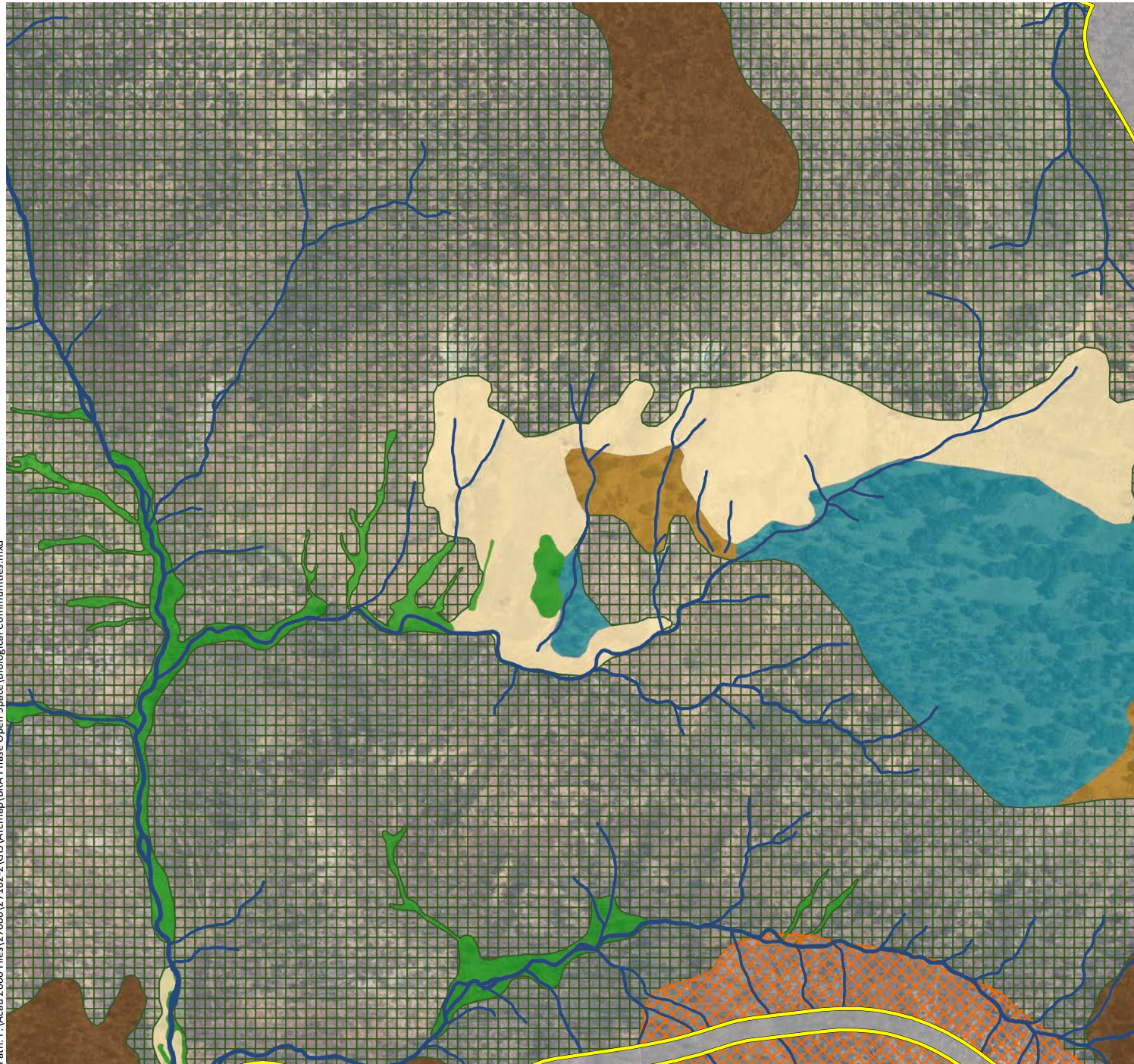
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 48)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

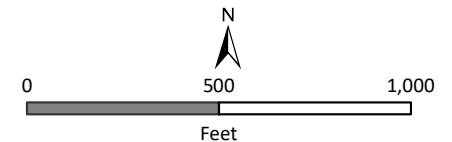
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

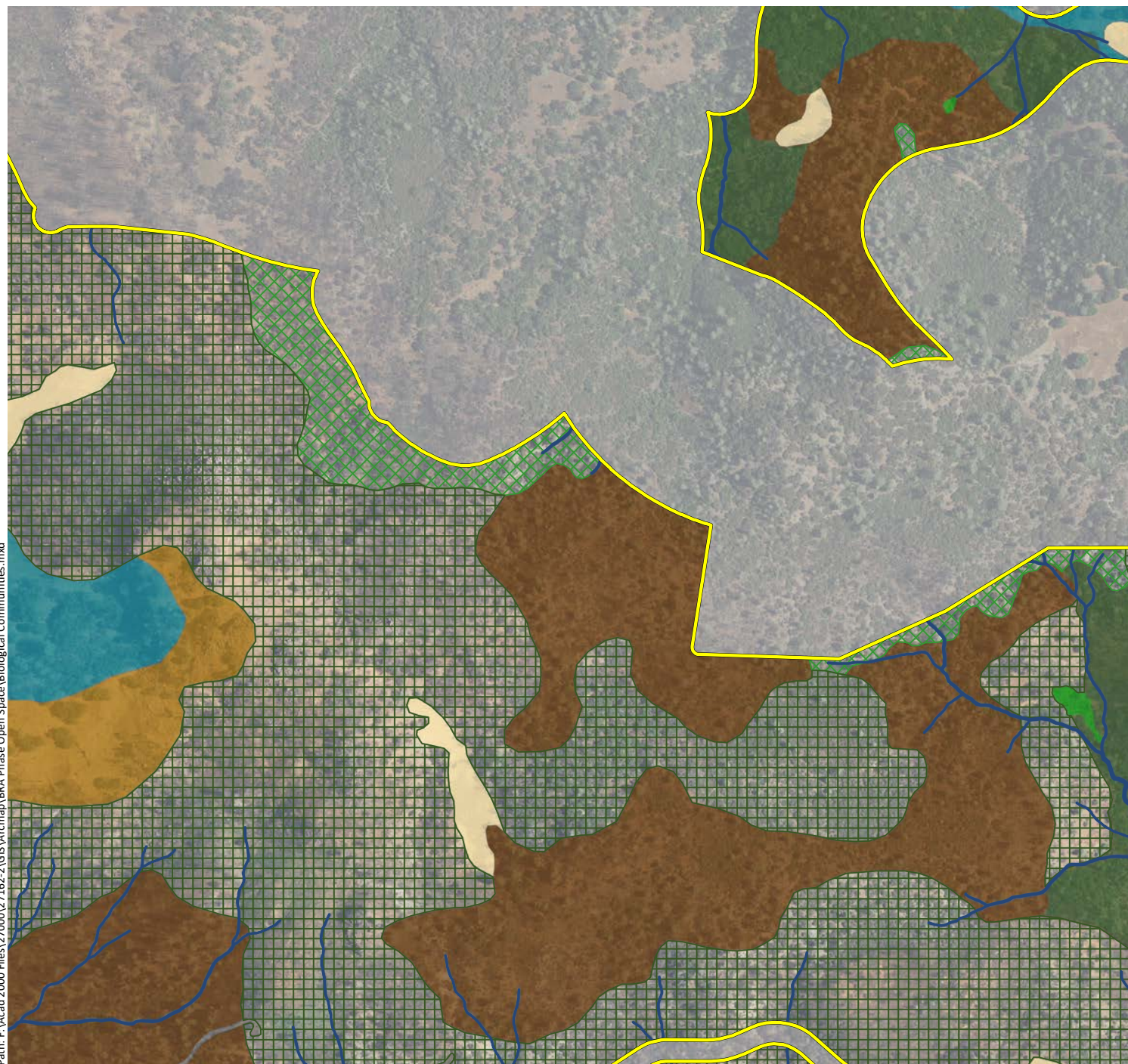
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 49)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

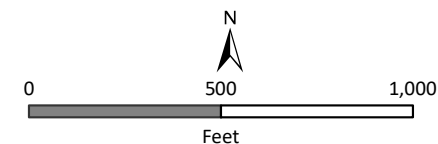
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

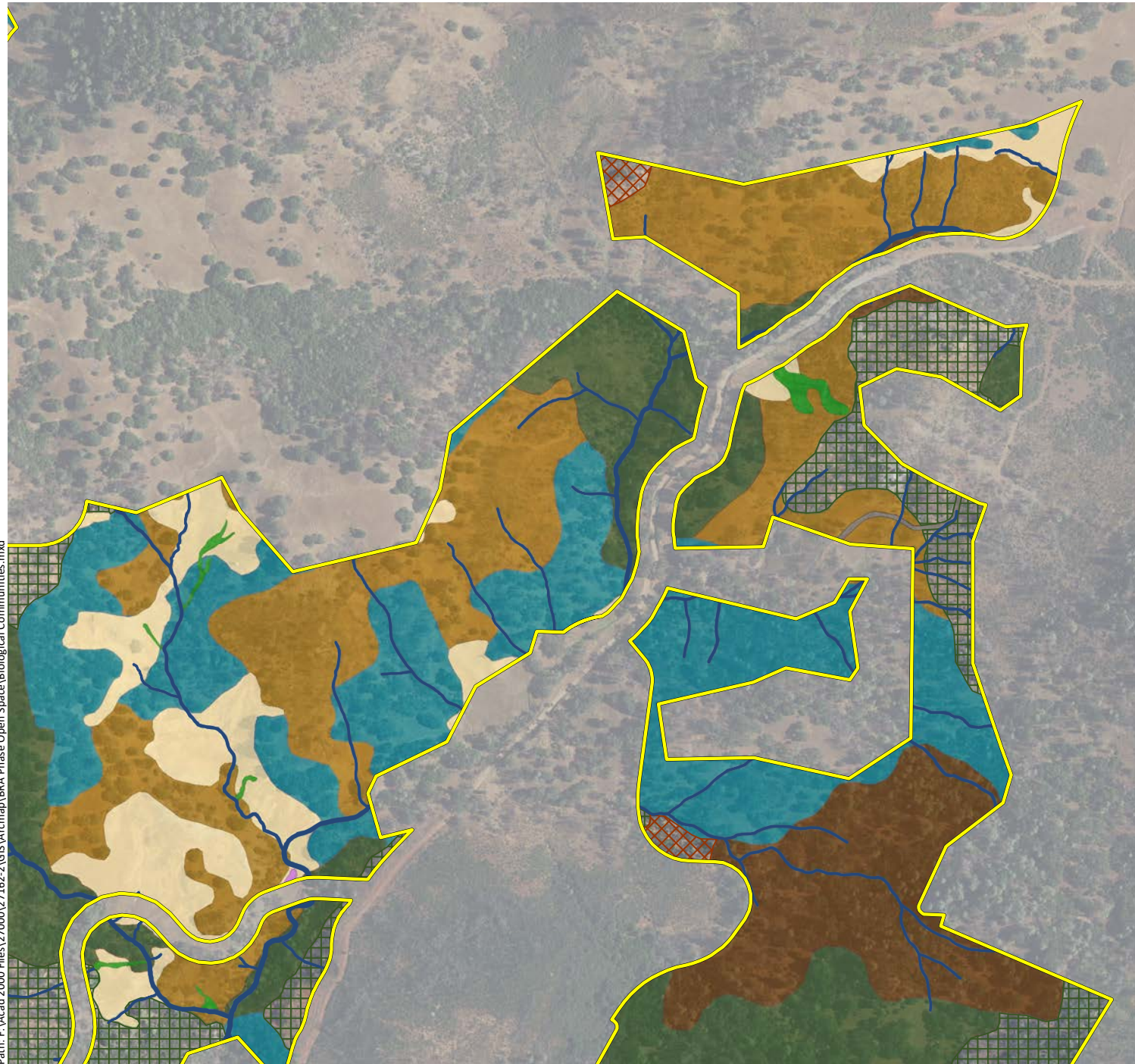
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 50)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

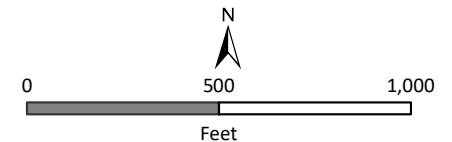
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 51)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

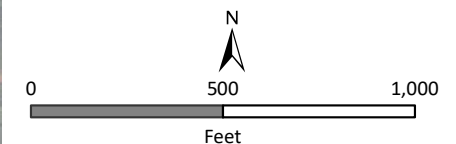
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

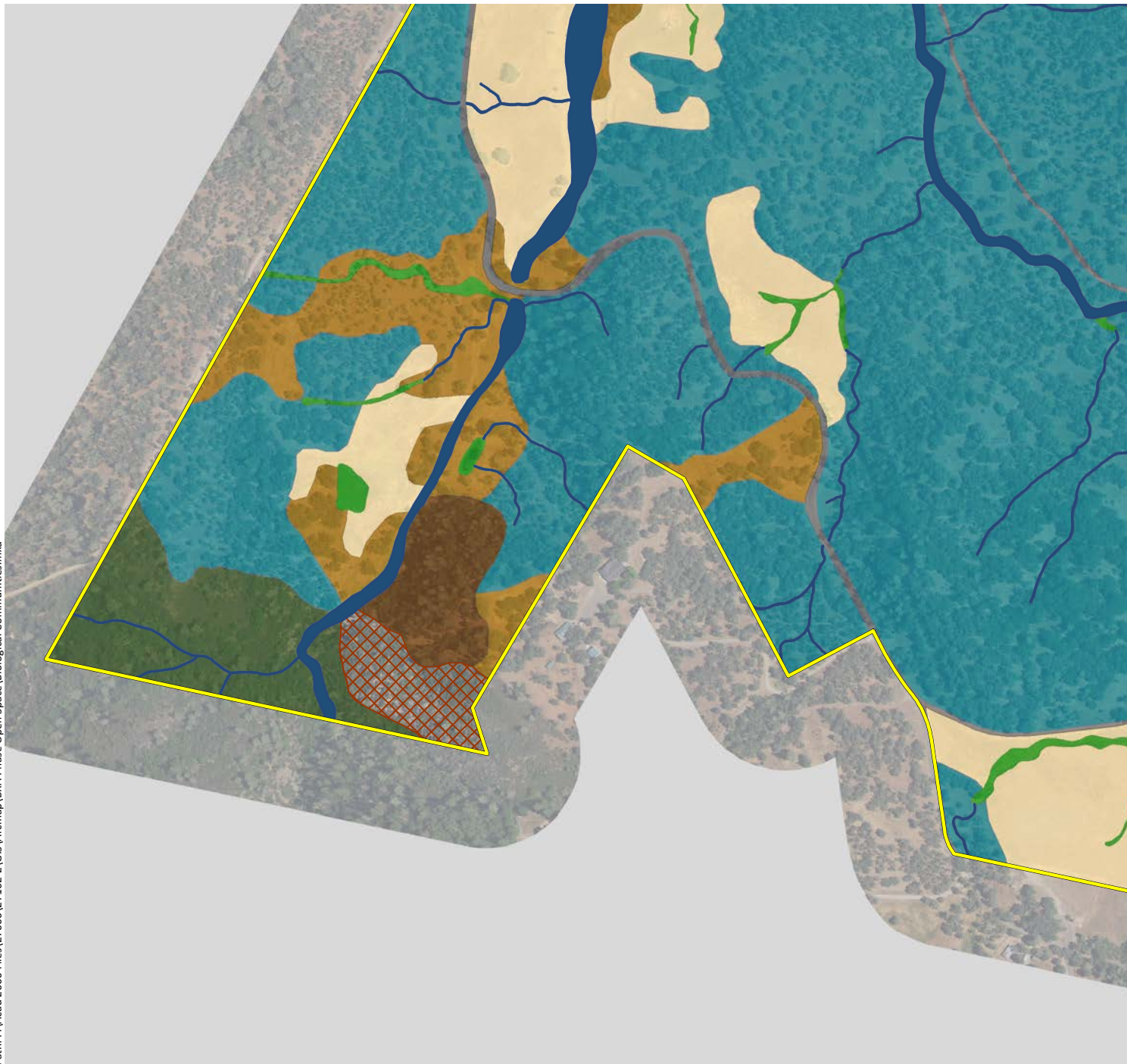
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 52)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

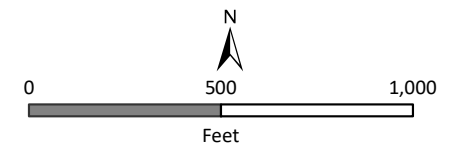
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

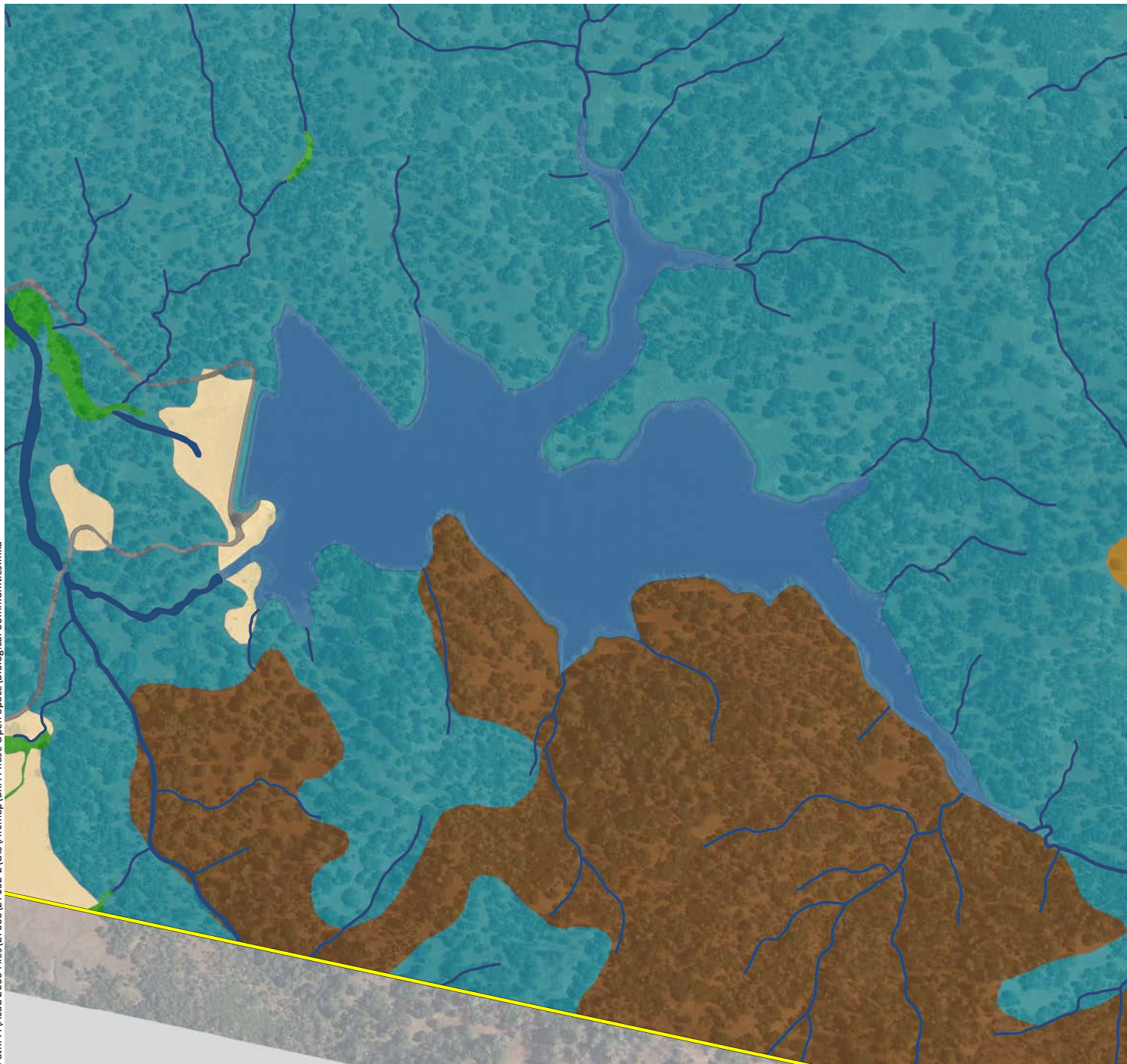
### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 53)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

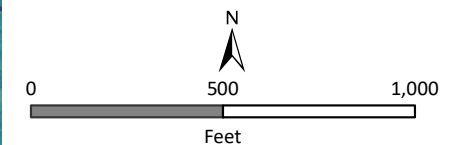
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

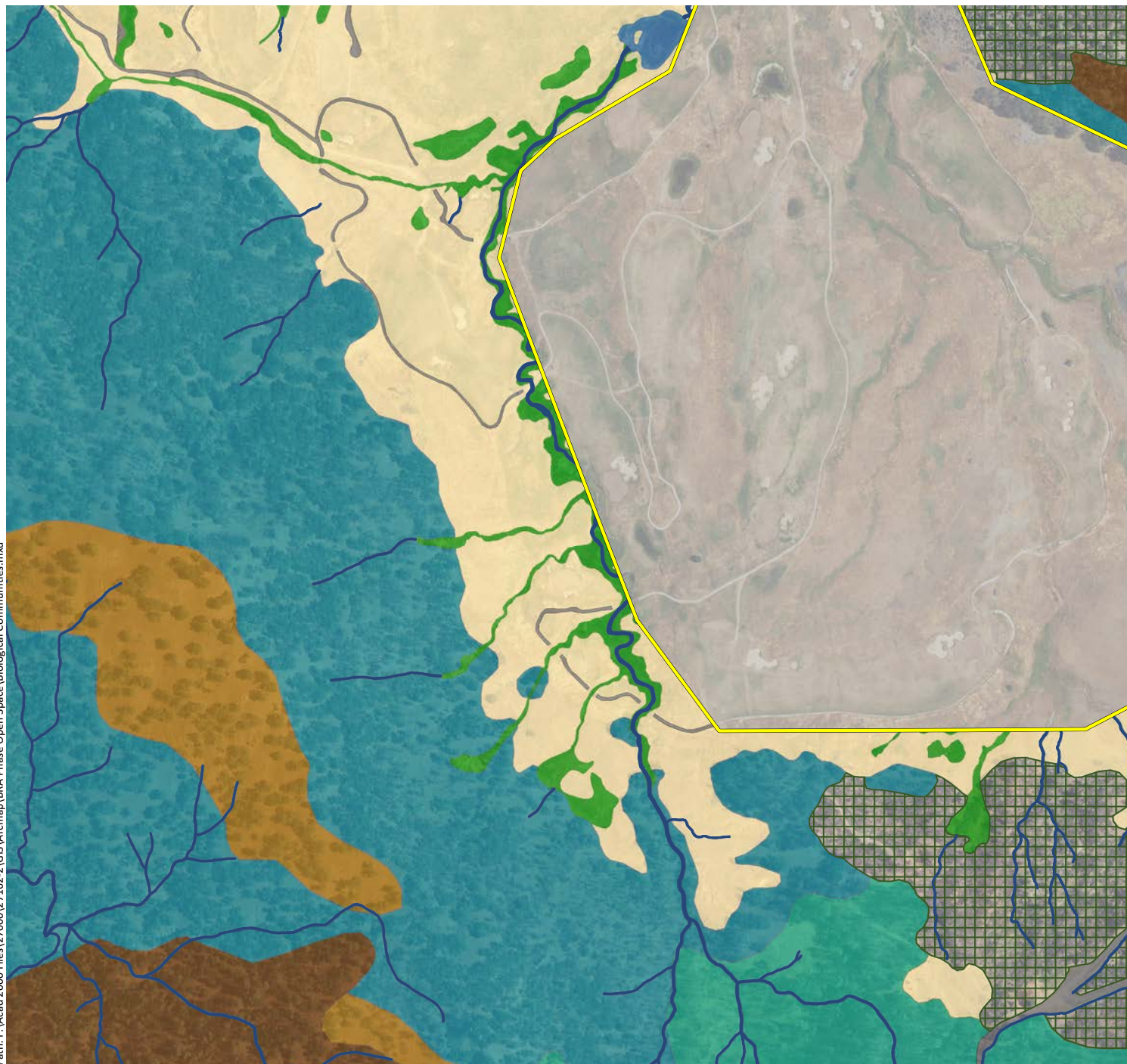
-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 54)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

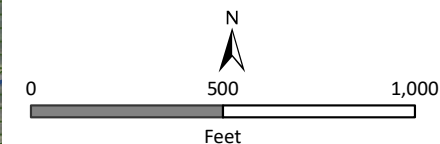
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 55)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

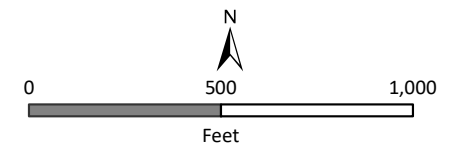
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

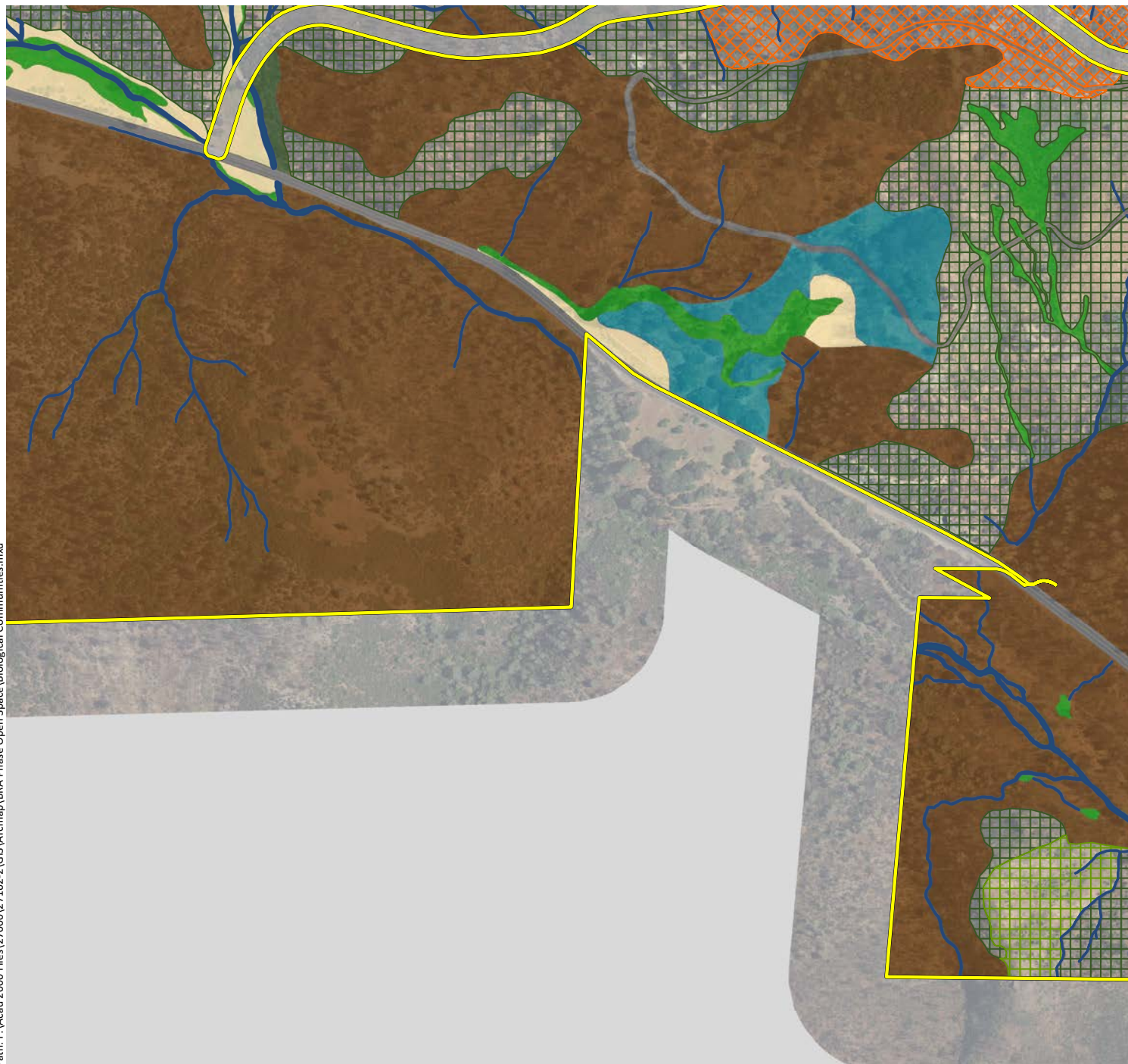
- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 56)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

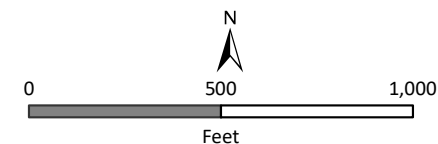
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

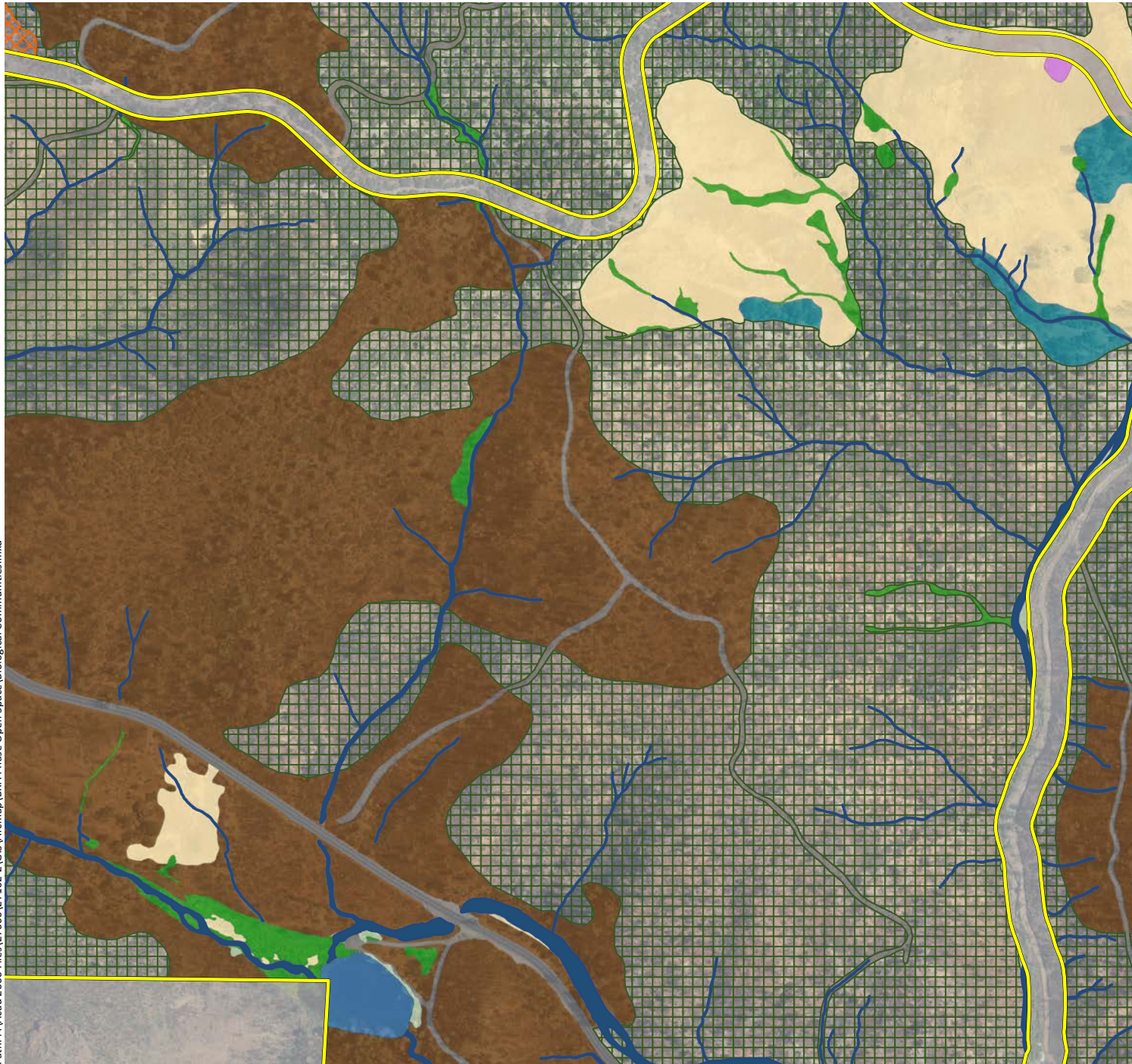
### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.





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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 57)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

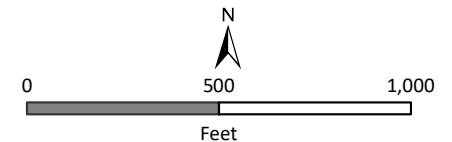
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 58)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

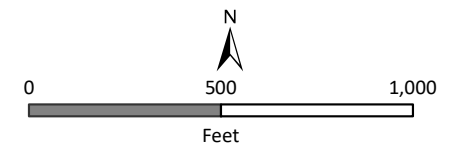
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

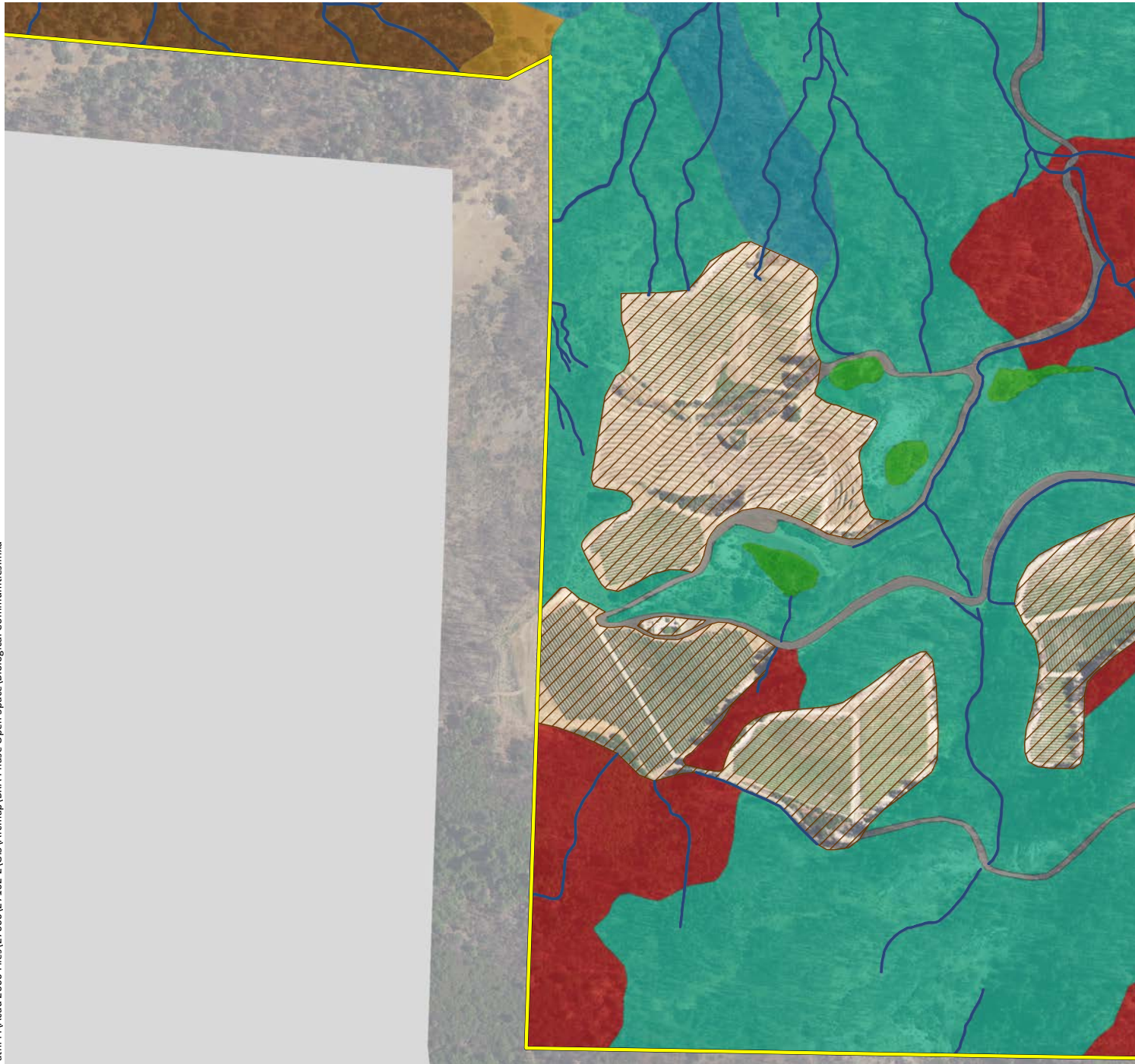
### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020





## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 59)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

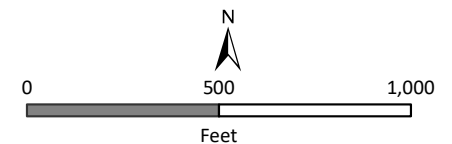
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 60)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

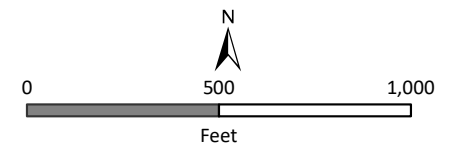
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 61)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

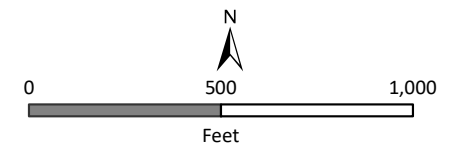
 Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

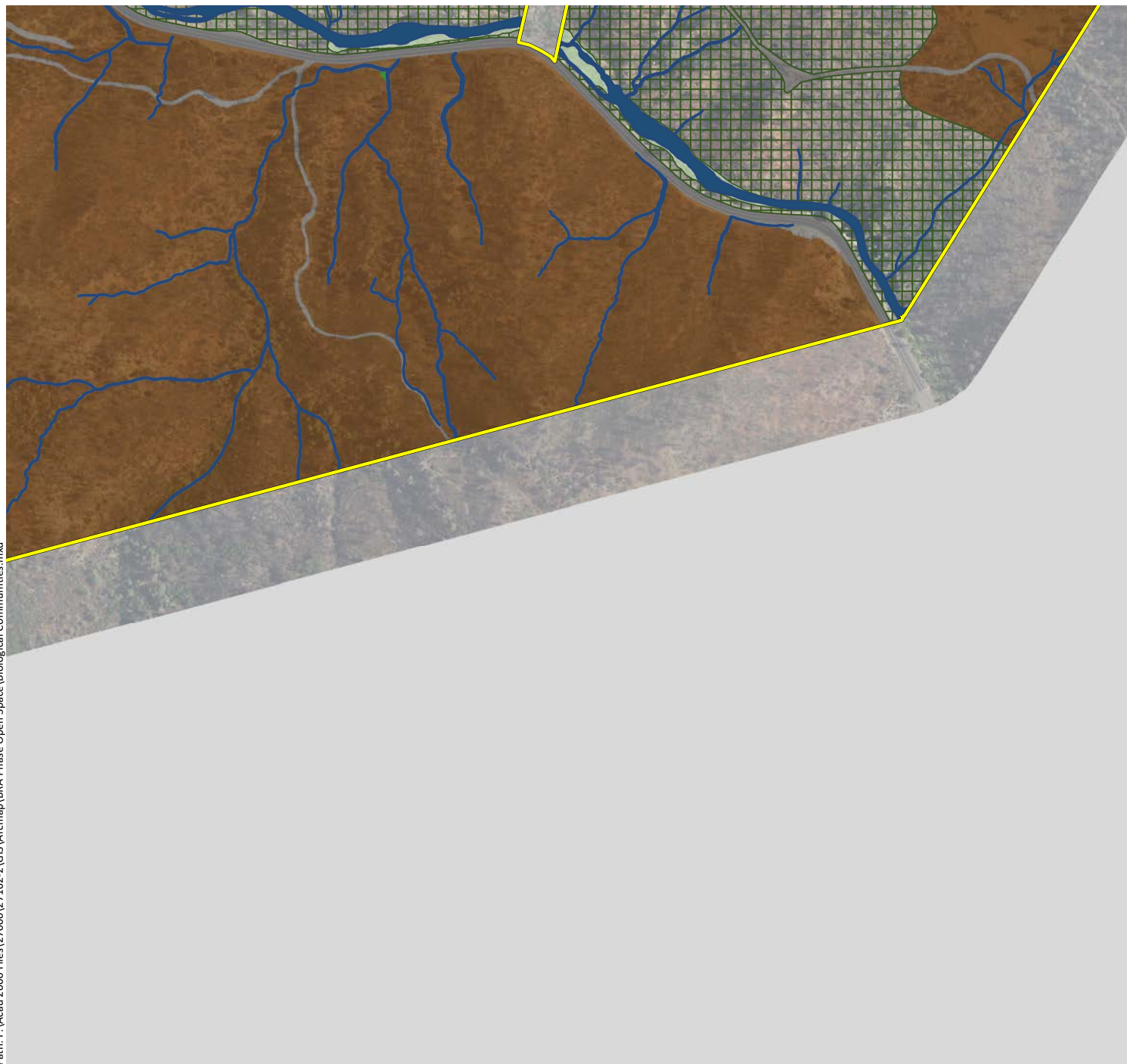
-  Musk Brush Chaparral - 2.0 ac.
-  Sargent Cypress Woodland - 10.7 ac.
-  Blue Oak Savanna - 752.8 ac.
-  Blue Oak Woodland - 2,431.2 ac.
-  Mixed Oak Woodland - 174.9 ac.
-  Valley Oak Woodland - 6.6 ac.
-  Interior Live Oak Woodland - 437.9 ac.
-  White Alder Groves - 10.2 ac.
-  Brewer Willow Thickets - 1.4 ac.
-  Purple Needlegrass Grassland - 0.8 ac.
-  Emergent Wetlands - 330.0 ac.
-  Ponds and Reservoirs - 626.1 ac.
-  Streams - 147.9 ac.

### Non-Sensitive Communities

-  Foothill Pine Woodland - 1,050.2 ac.
-  Douglas Fir Forest - 61.5 ac.
-  Deer Weed Scrub - 15.0 ac.
-  Chamise Chaparral - 445.8 ac.
-  Whiteleaf Manzanita Chaparral - 69.4 ac.
-  California Yerba Santa Scrub - 30.2 ac.
-  Scrub Oak Chaparral - 9.7 ac.
-  Leather Oak Chaparral - 2,256.9 ac.
-  Non-native Annual Grasslands - 1,347.9 ac.
-  Rock Outcrop - 22.7 ac.
-  Agriculture - 1,170.7 ac.
-  Developed - 136.8 ac.



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## Appendix A. Biological Communities Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 62)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

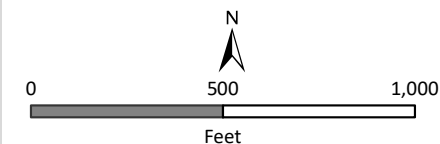
Phase 2 & Open Space Study Area - 11,549 ac.

### Sensitive Communities

- Musk Brush Chaparral - 2.0 ac.
- Sargent Cypress Woodland - 10.7 ac.
- Blue Oak Savanna - 752.8 ac.
- Blue Oak Woodland - 2,431.2 ac.
- Mixed Oak Woodland - 174.9 ac.
- Valley Oak Woodland - 6.6 ac.
- Interior Live Oak Woodland - 437.9 ac.
- White Alder Groves - 10.2 ac.
- Brewer Willow Thickets - 1.4 ac.
- Purple Needlegrass Grassland - 0.8 ac.
- Emergent Wetlands - 330.0 ac.
- Ponds and Reservoirs - 626.1 ac.
- Streams - 147.9 ac.

### Non-Sensitive Communities

- Foothill Pine Woodland - 1,050.2 ac.
- Douglas Fir Forest - 61.5 ac.
- Deer Weed Scrub - 15.0 ac.
- Chamise Chaparral - 445.8 ac.
- Whiteleaf Manzanita Chaparral - 69.4 ac.
- California Yerba Santa Scrub - 30.2 ac.
- Scrub Oak Chaparral - 9.7 ac.
- Leather Oak Chaparral - 2,256.9 ac.
- Non-native Annual Grasslands - 1,347.9 ac.
- Rock Outcrop - 22.7 ac.
- Agriculture - 1,170.7 ac.
- Developed - 136.8 ac.



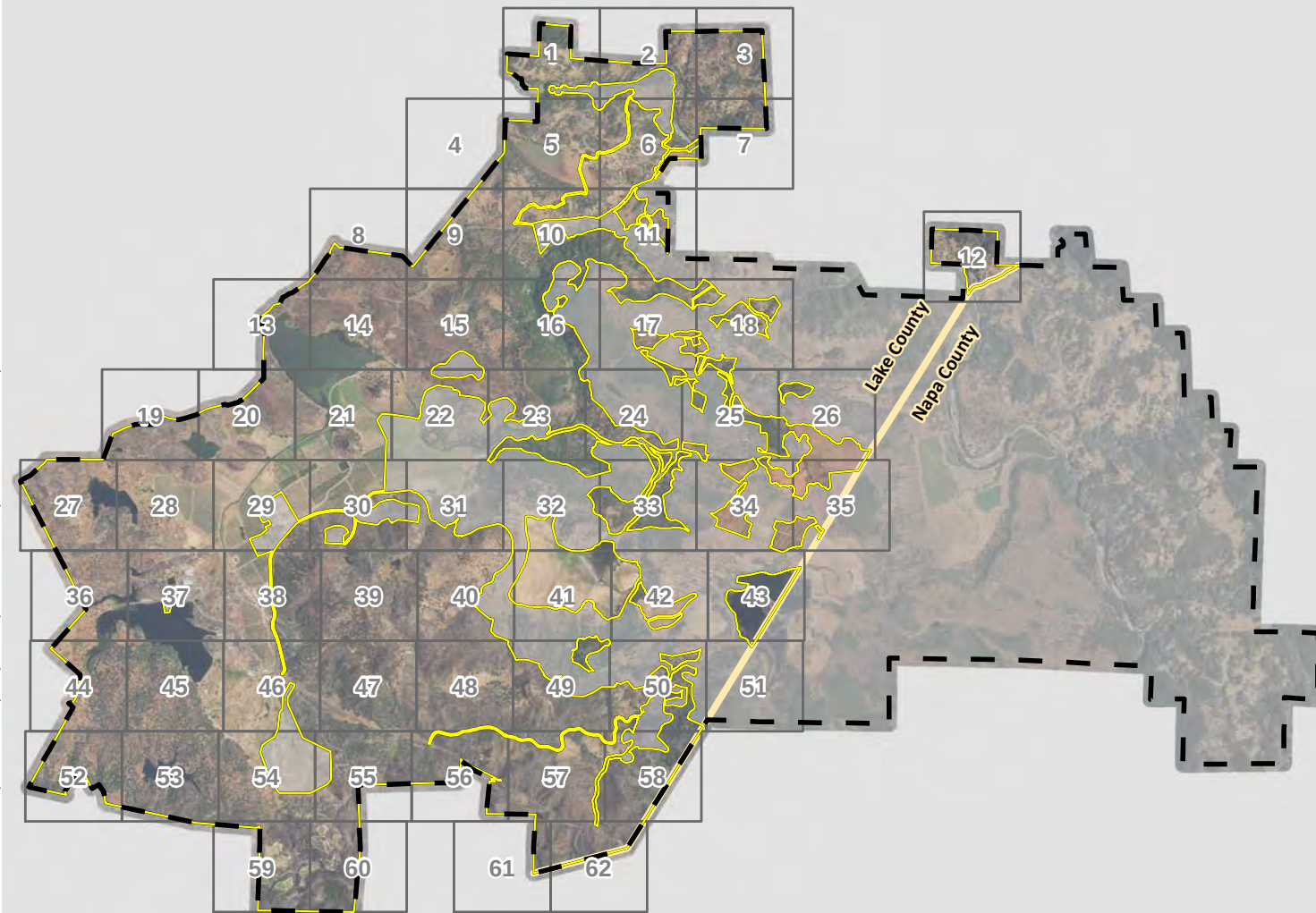
## **APPENDIX B**

### **AQUATIC RESOURCES AND RIPARIAN HABITAT MAPPED WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**





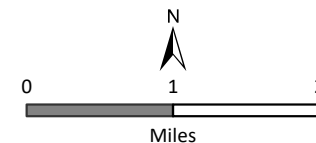
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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Overview)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

- Property Boundary
- Phase 2 and Open Space Study Area
- Mapbook Grid
- County Boundary

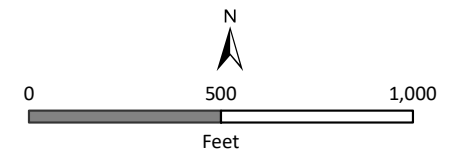


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 1)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



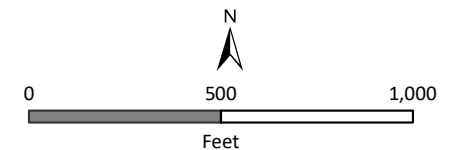


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 2)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



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Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

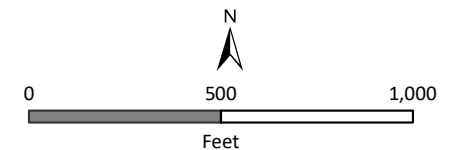


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 3)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



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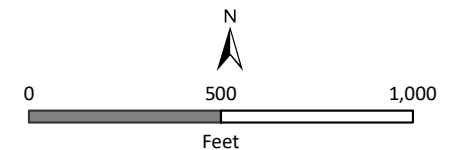
Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 4)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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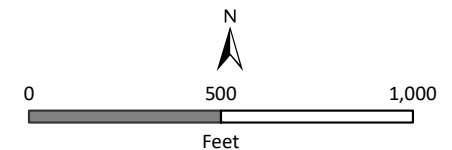


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 5)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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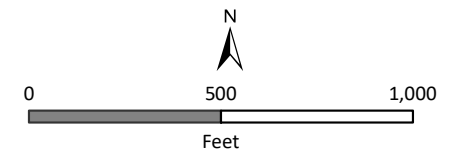


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 6)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 7)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

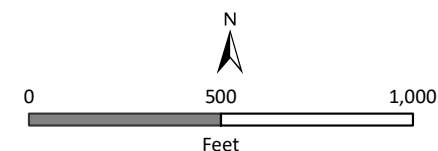
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





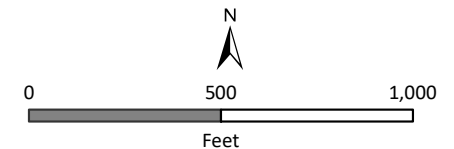
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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 8)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

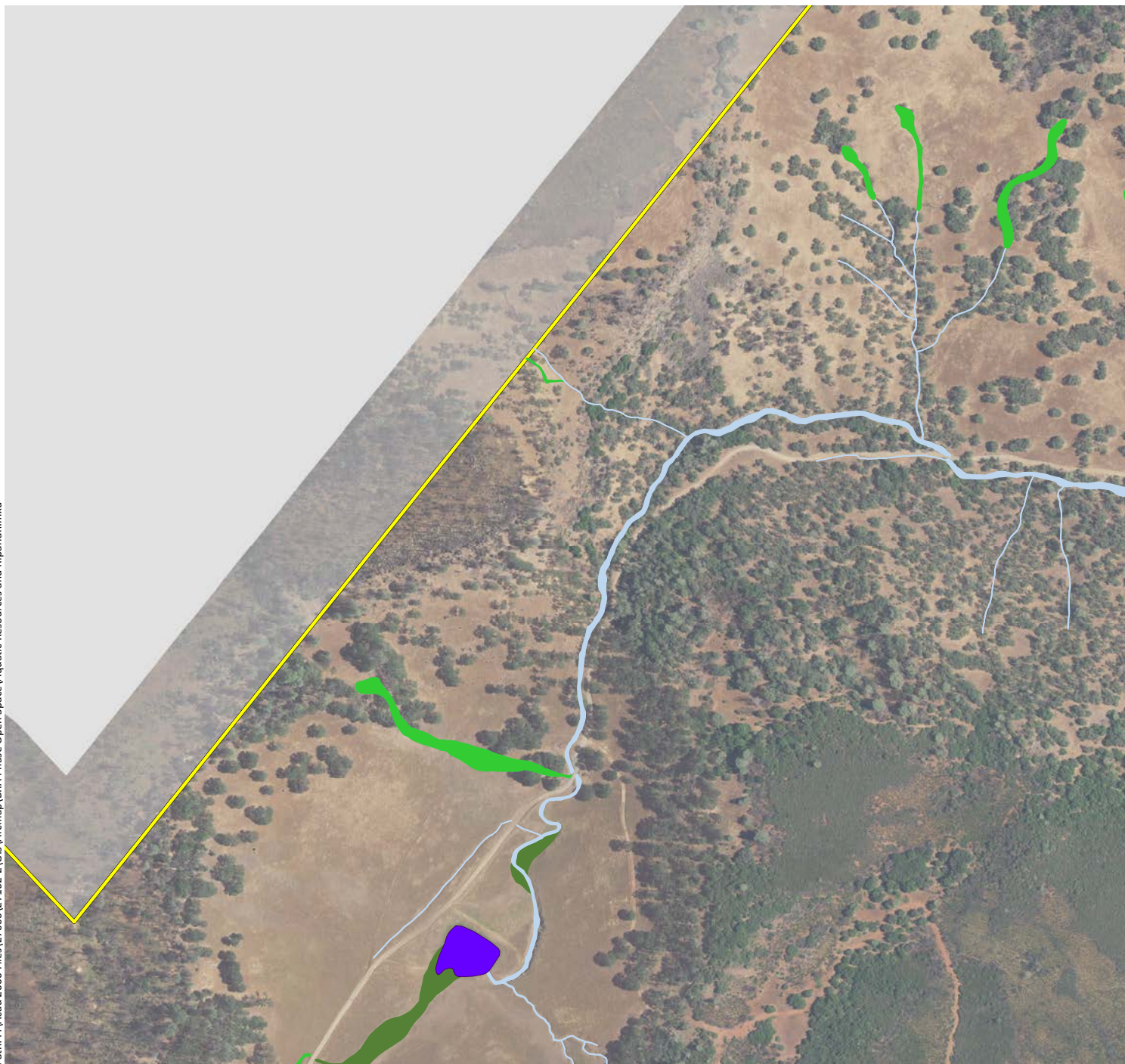


\* The extent of waters shown is based on  
the location of the ordinary high water mark



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 9)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

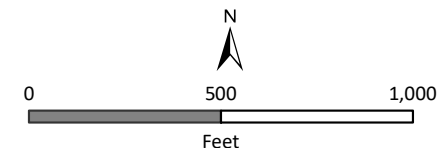
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

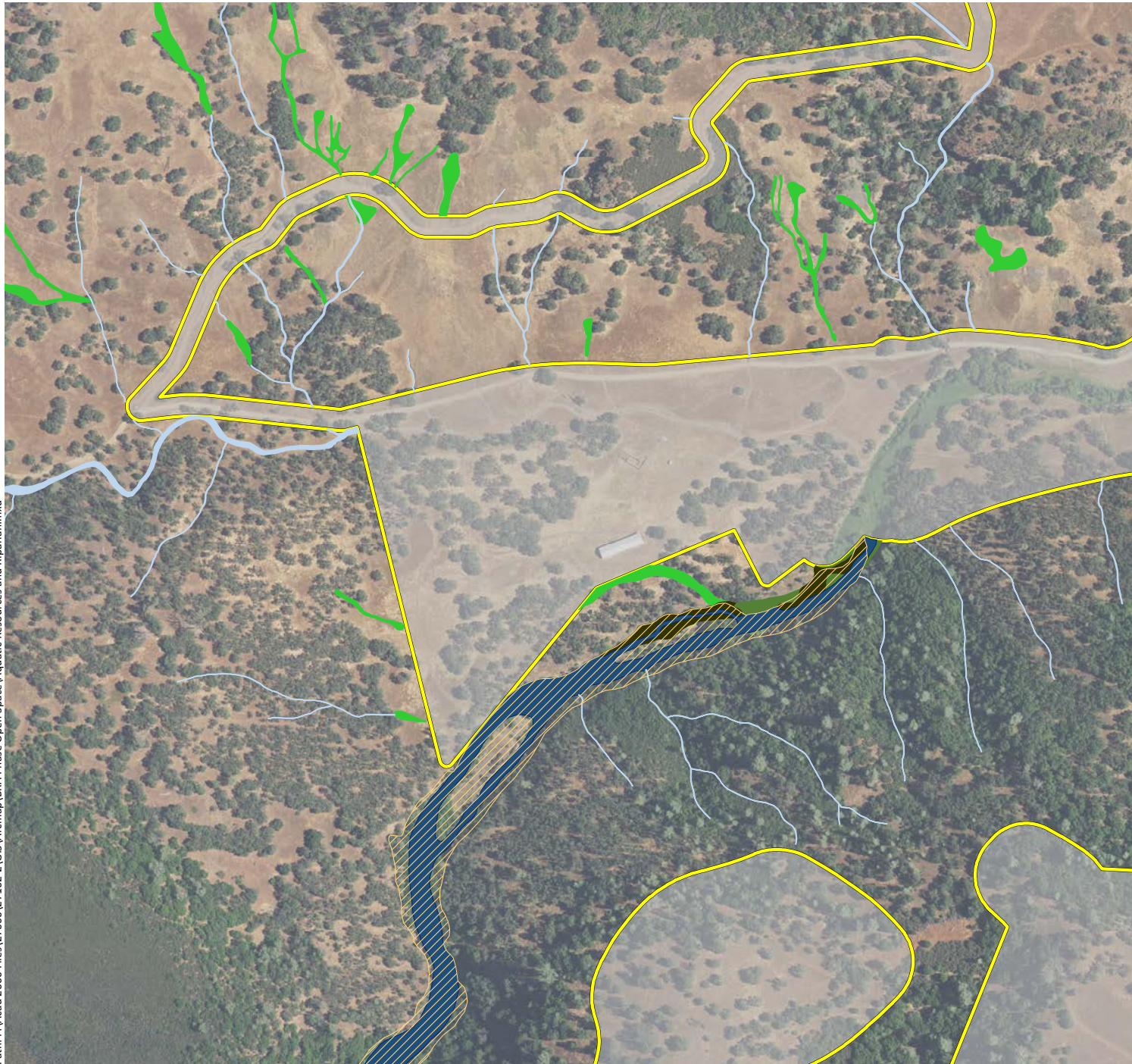
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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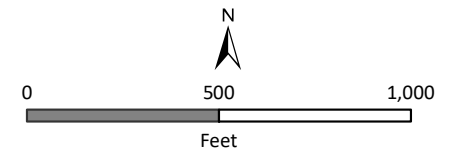


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 10)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

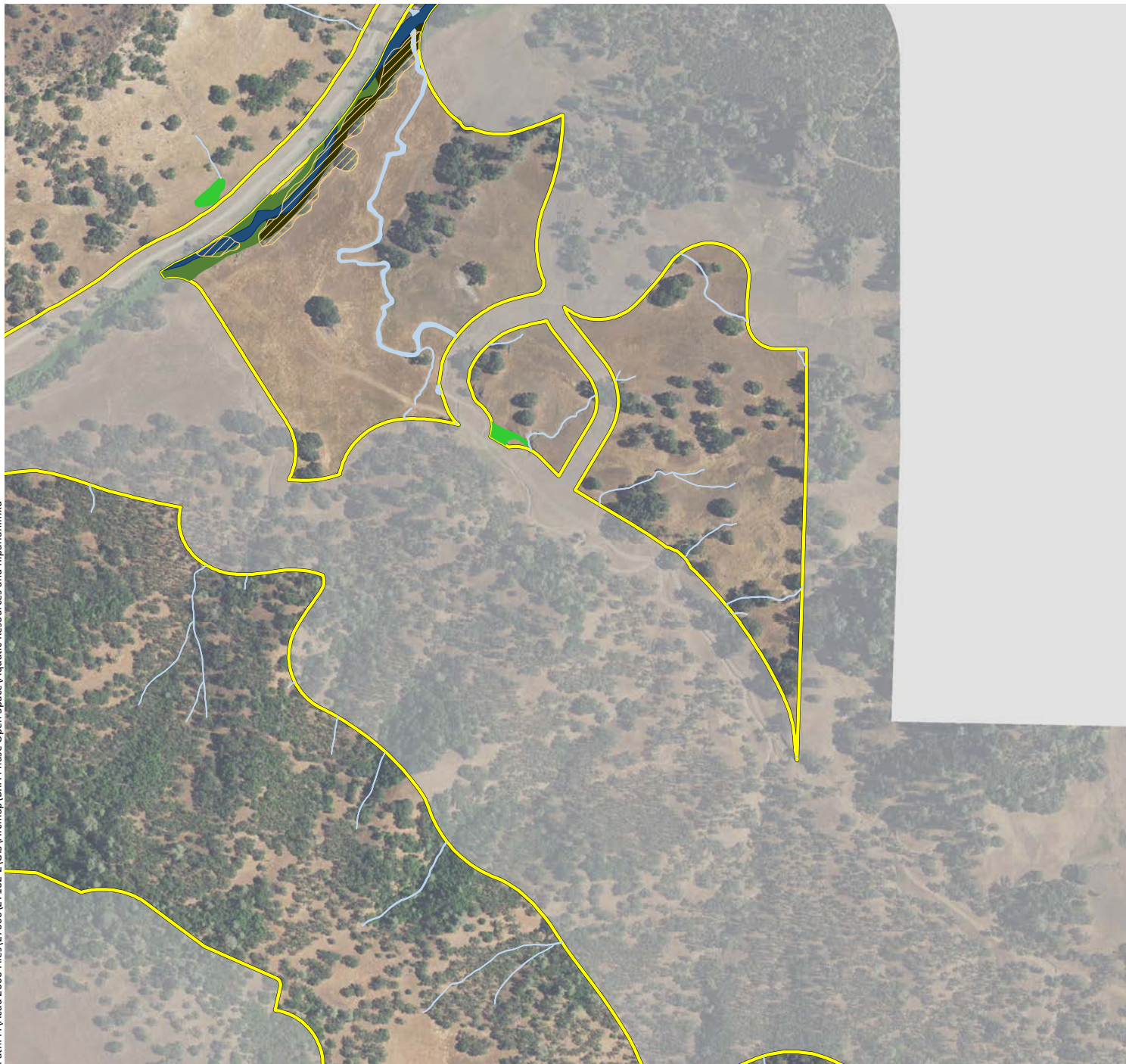
|                                                     |                                              |
|-----------------------------------------------------|----------------------------------------------|
|                                                     | Phase 1 Study Area - 11,549 ac.              |
|                                                     | Riparian Woodland - 34.11 ac.                |
| <b><u>Wetlands - 330.00 ac.</u></b>                 |                                              |
|                                                     | Forested Wetlands - 1.33 ac.                 |
|                                                     | Scrub-Shrub Wetlands - 1.15 ac.              |
|                                                     | Seasonal Wetland Depressions - 53.85 ac.     |
|                                                     | Seasonal Wetland Ditches - 0.62 ac.          |
|                                                     | Seasonal Wetland Pond Fringes - 0.01 ac.     |
|                                                     | Seasonal Wetland Seeps/Swales - 157.86 ac.   |
|                                                     | Seasonal Wetland Wet Meadows - 66.11 ac.     |
|                                                     | Stream Fringe/In-Stream Wetlands - 49.07 ac. |
| <b><u>Waters* - 773.93 ac. &amp; 735,754 LF</u></b> |                                              |
|                                                     | Ephemeral Ditches - 0.03 ac. & 942 LF        |
|                                                     | Ephemeral Streams - 33.35 ac. & 610,691 LF   |
|                                                     | Intermittent Streams - 14.93 ac. & 58,059 LF |
|                                                     | Perennial Streams - 99.54 ac. & 66,062 LF    |
|                                                     | Open Waters - 626.08 ac.                     |

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 11)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

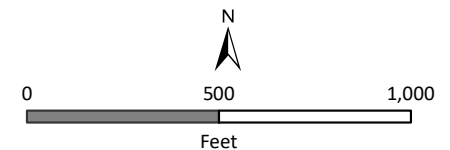
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark



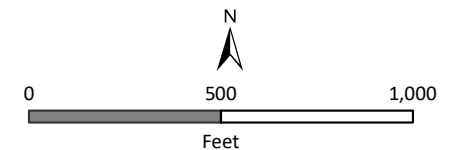


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 12)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





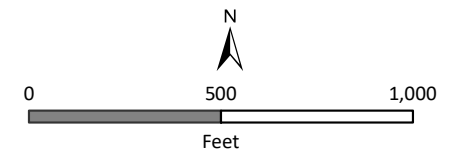
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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 13)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



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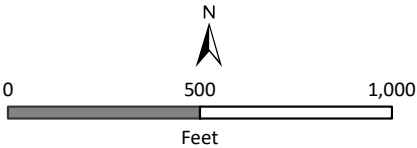


**Appendix B.**  
**Aquatic Resources and**  
**Riparian Habitat Mapped**  
**within the Phase 2 and**  
**Open Space Study Area**  
**(Mapbook Sheet 14)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

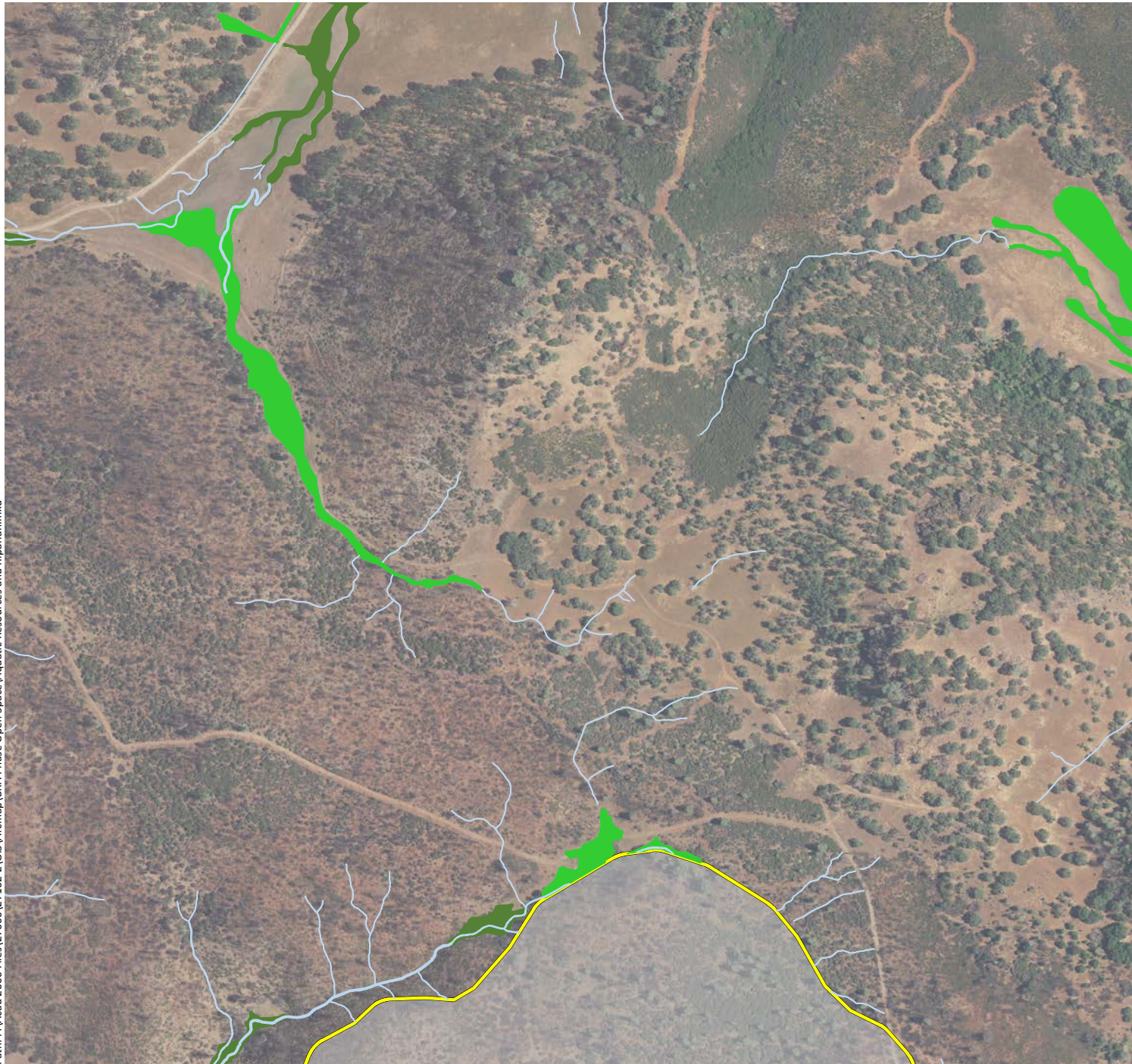
-  Phase 1 Study Area - 11,549 ac.
-  Riparian Woodland - 34.11 ac.
- Wetlands - 330.00 ac.**
  -  Forested Wetlands - 1.33 ac.
  -  Scrub-Shrub Wetlands - 1.15 ac.
  -  Seasonal Wetland Depressions - 53.85 ac.
  -  Seasonal Wetland Ditches - 0.62 ac.
  -  Seasonal Wetland Pond Fringes - 0.01 ac.
  -  Seasonal Wetland Seeps/Swales - 157.86 ac.
  -  Seasonal Wetland Wet Meadows - 66.11 ac.
  -  Stream Fringe/In-Stream Wetlands - 49.07 ac.
- Waters\* - 773.93 ac. & 735,754 LF**
  -  Ephemeral Ditches - 0.03 ac. & 942 LF
  -  Ephemeral Streams - 33.35 ac. & 610,691 LF
  -  Intermittent Streams - 14.93 ac. & 58,059 LF
  -  Perennial Streams - 99.54 ac. & 66,062 LF
  -  Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark



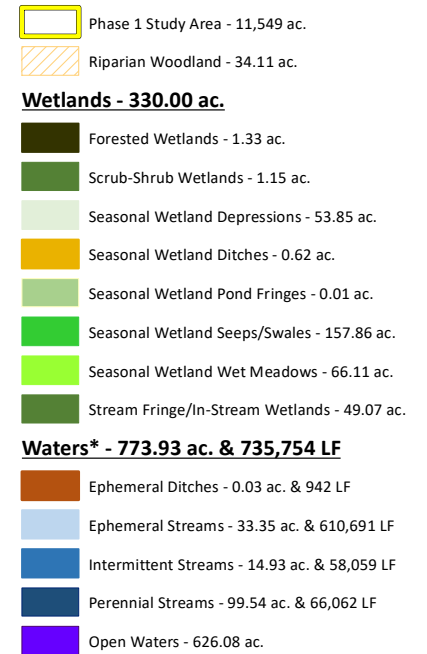


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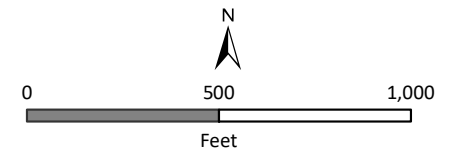


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 15)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 16)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

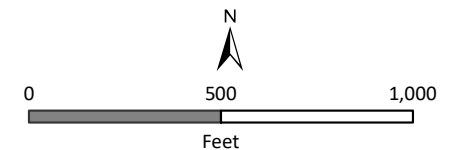
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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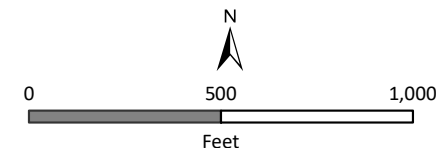


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 17)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

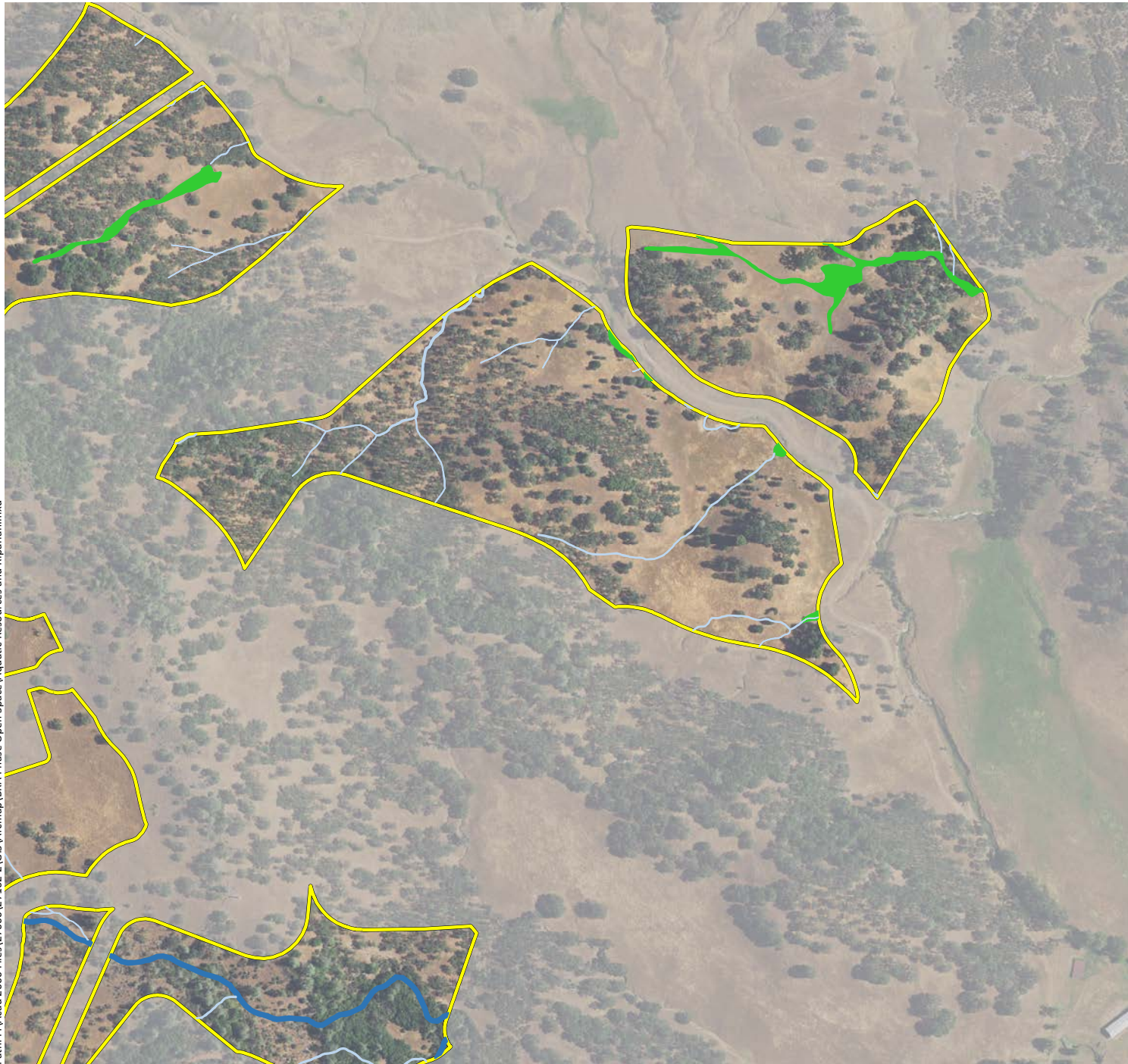


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 18)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

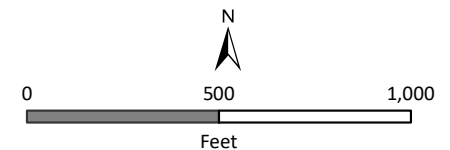
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





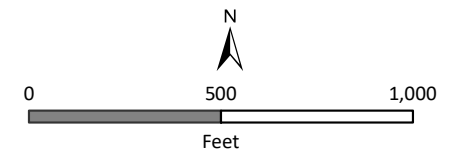
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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 19)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

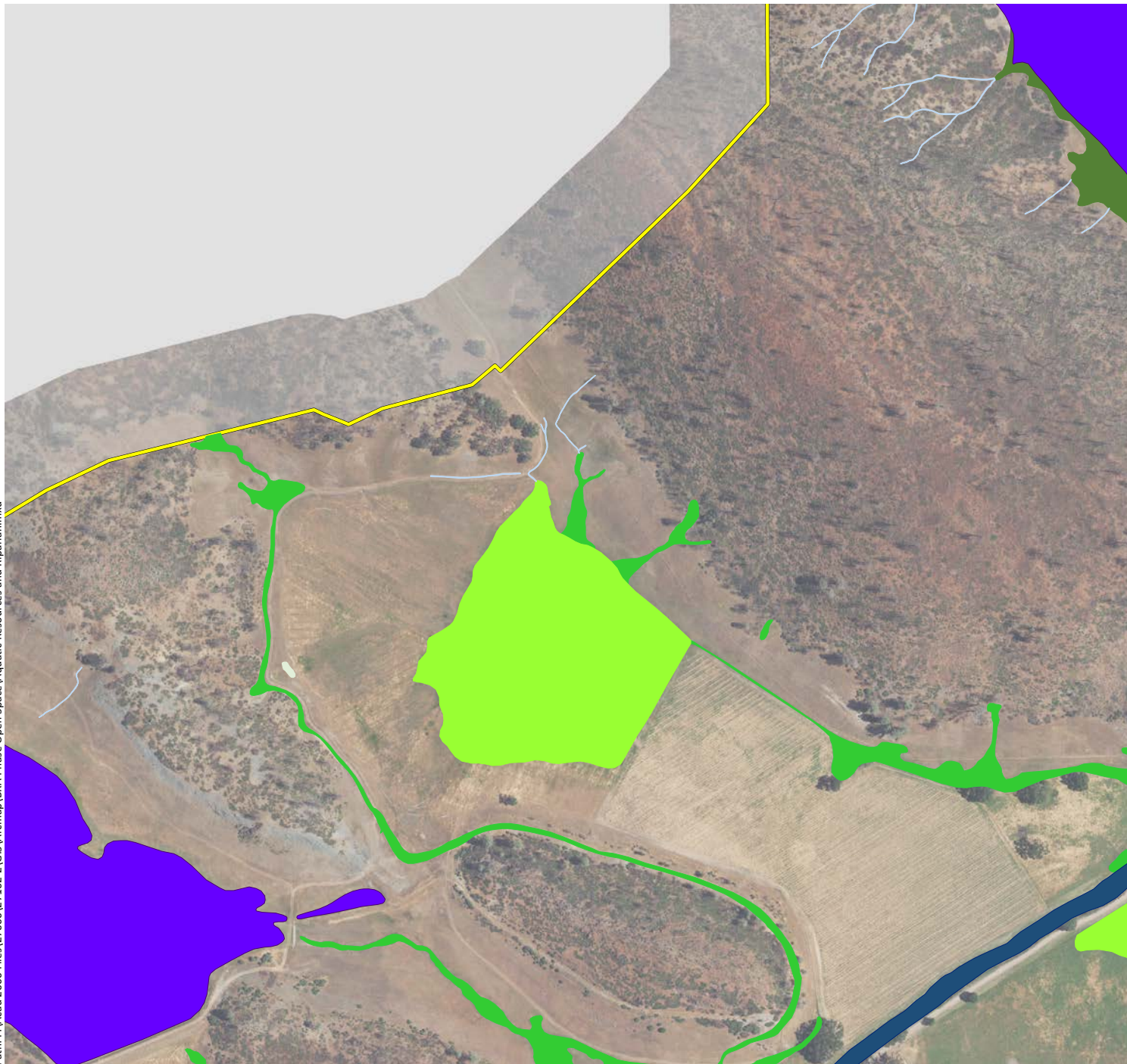


\* The extent of waters shown is based on  
the location of the ordinary high water mark



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

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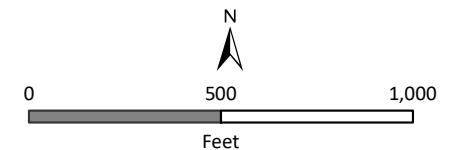


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 20)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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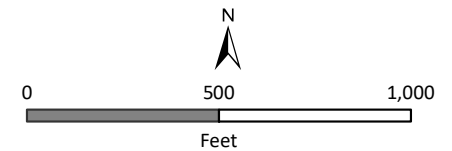


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 21)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

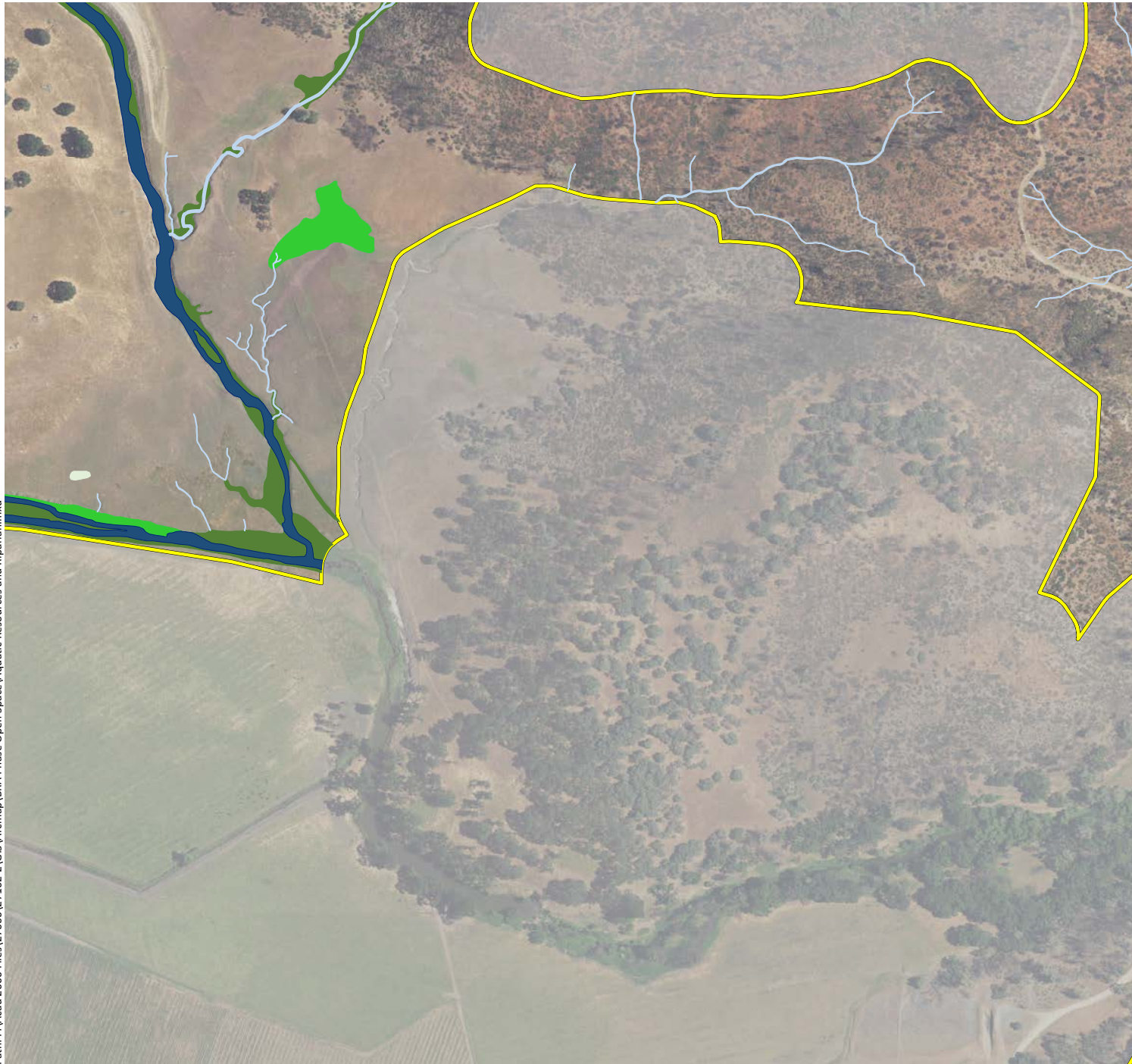
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|-----------------------------------------------------|----------------------------------------------|
|                                                     | Phase 1 Study Area - 11,549 ac.              |
|                                                     | Riparian Woodland - 34.11 ac.                |
| <b><u>Wetlands - 330.00 ac.</u></b>                 |                                              |
|                                                     | Forested Wetlands - 1.33 ac.                 |
|                                                     | Scrub-Shrub Wetlands - 1.15 ac.              |
|                                                     | Seasonal Wetland Depressions - 53.85 ac.     |
|                                                     | Seasonal Wetland Ditches - 0.62 ac.          |
|                                                     | Seasonal Wetland Pond Fringes - 0.01 ac.     |
|                                                     | Seasonal Wetland Seeps/Swales - 157.86 ac.   |
|                                                     | Seasonal Wetland Wet Meadows - 66.11 ac.     |
|                                                     | Stream Fringe/In-Stream Wetlands - 49.07 ac. |
| <b><u>Waters* - 773.93 ac. &amp; 735,754 LF</u></b> |                                              |
|                                                     | Ephemeral Ditches - 0.03 ac. & 942 LF        |
|                                                     | Ephemeral Streams - 33.35 ac. & 610,691 LF   |
|                                                     | Intermittent Streams - 14.93 ac. & 58,059 LF |
|                                                     | Perennial Streams - 99.54 ac. & 66,062 LF    |
|                                                     | Open Waters - 626.08 ac.                     |

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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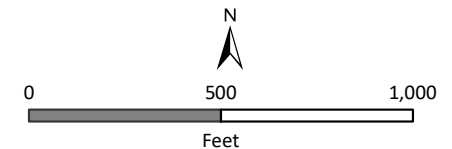


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 22)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

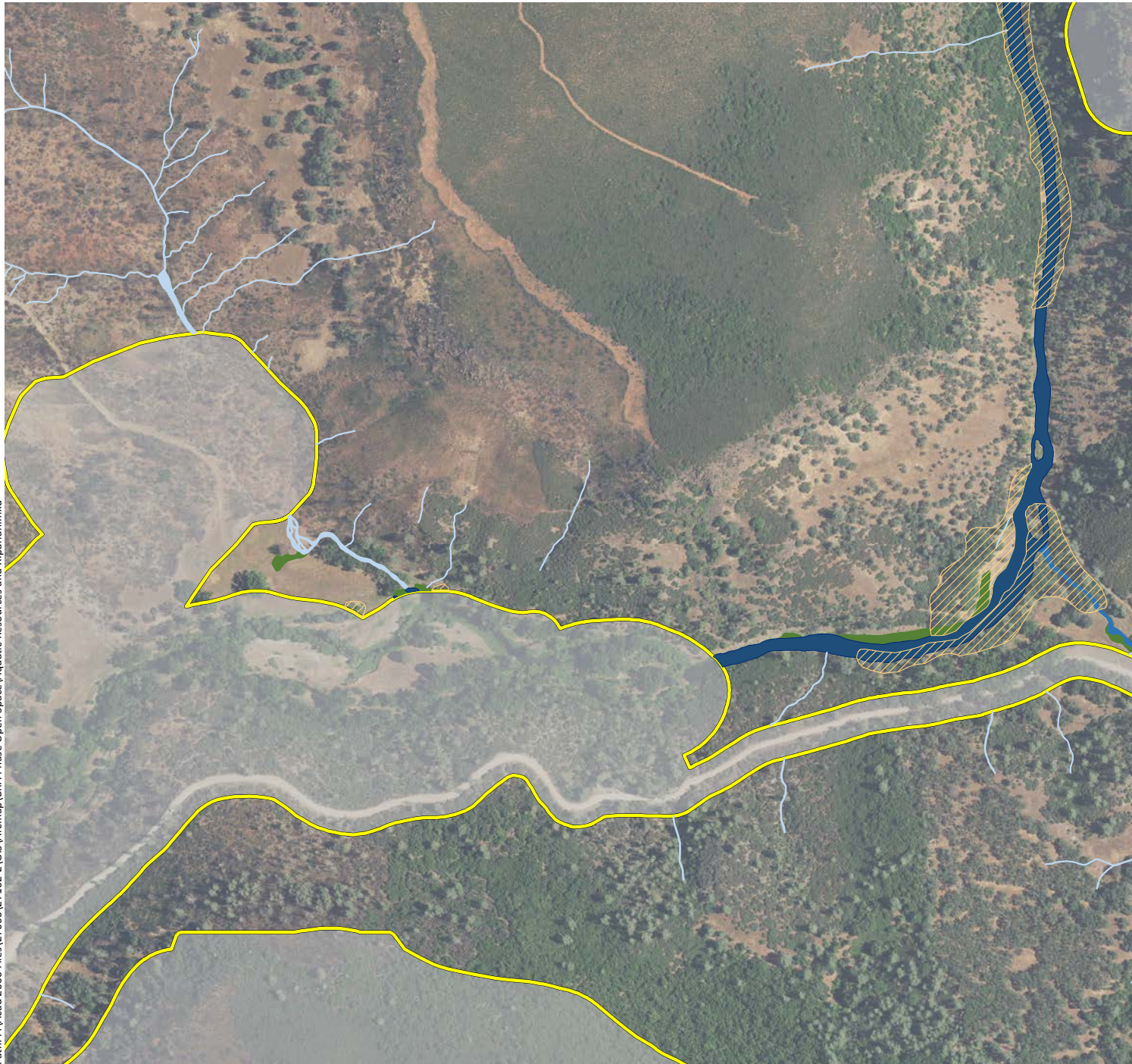


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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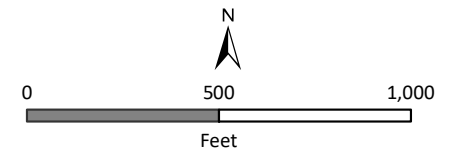


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 23)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020

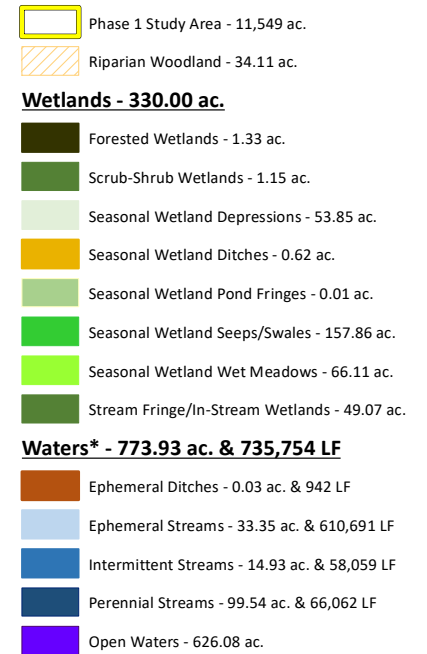


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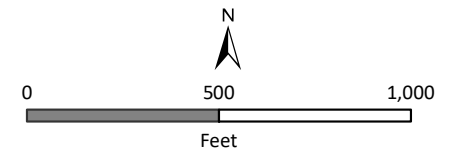


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 24)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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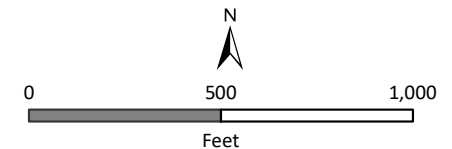


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 25)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 26)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

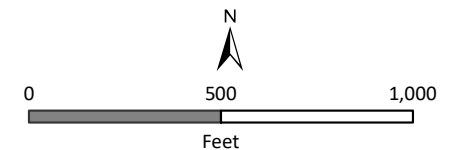
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

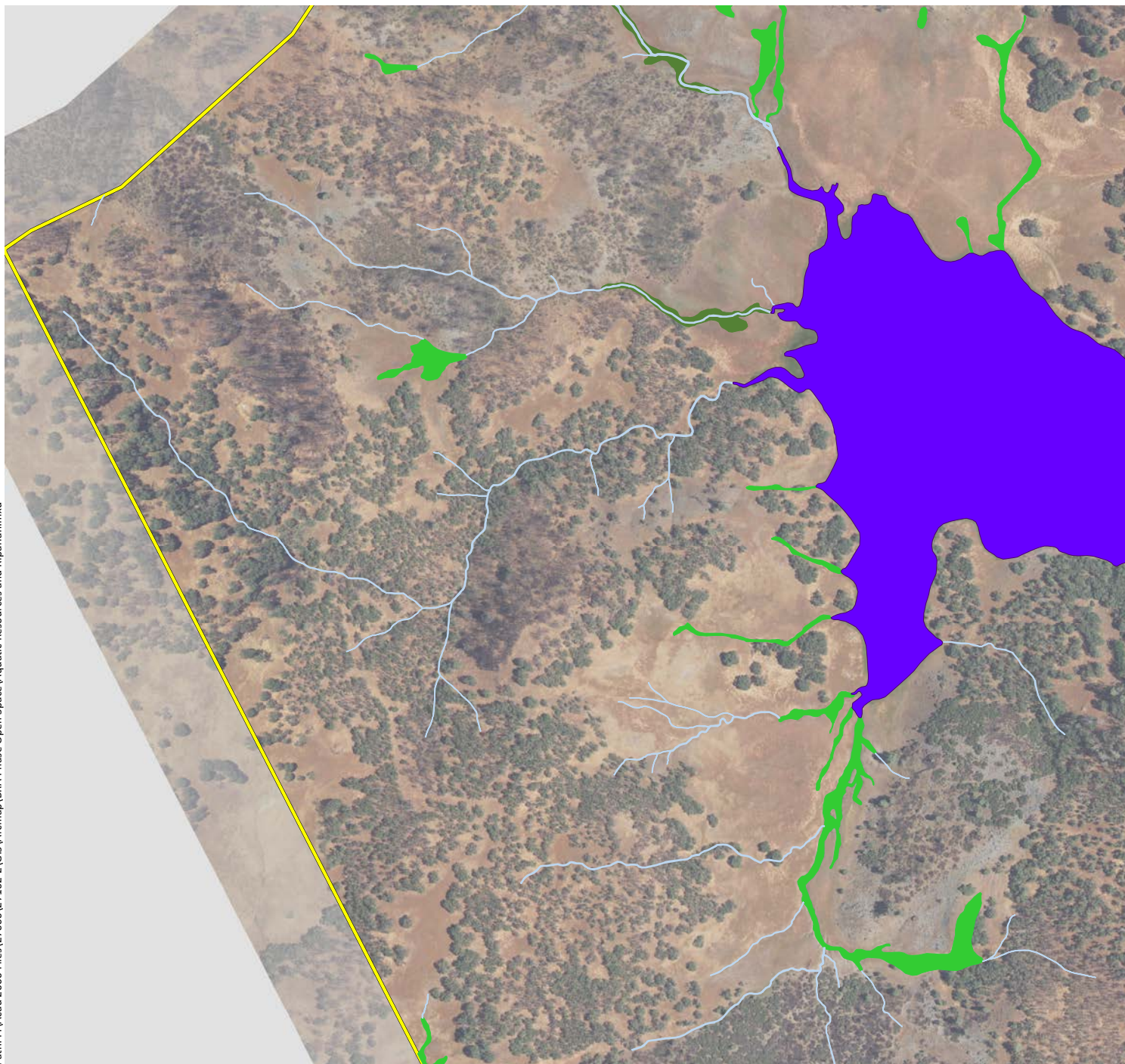
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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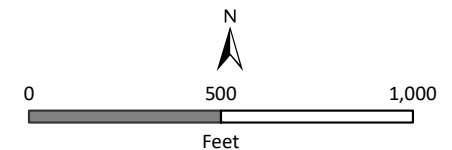


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 27)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

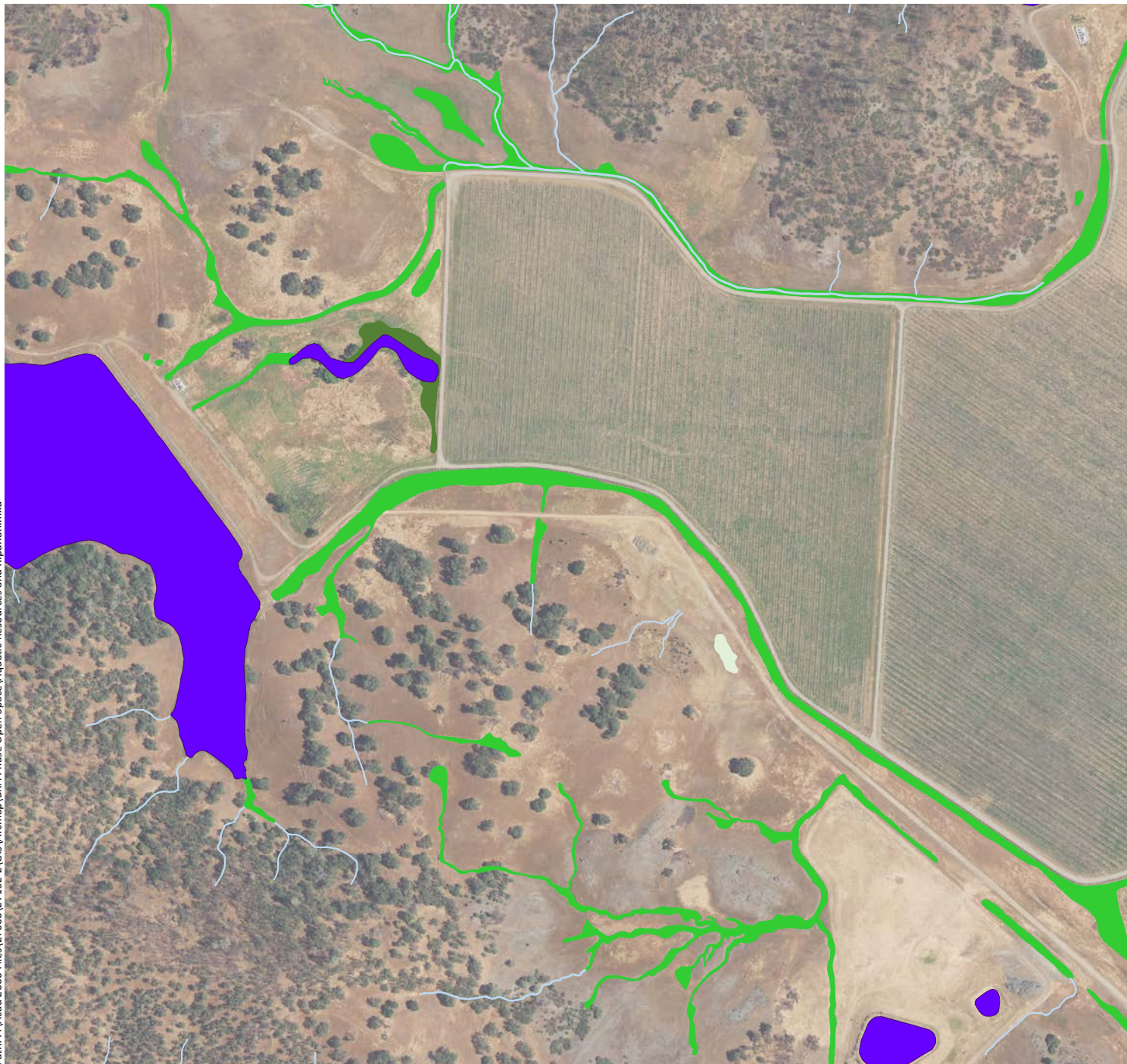


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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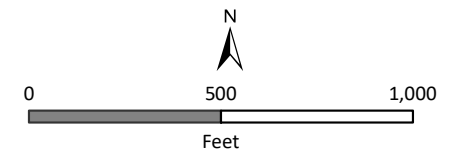


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 28)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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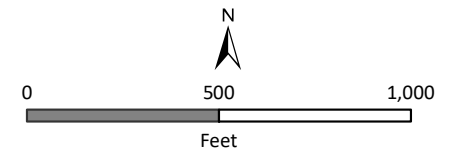


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 29)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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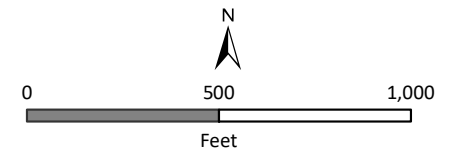


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 30)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

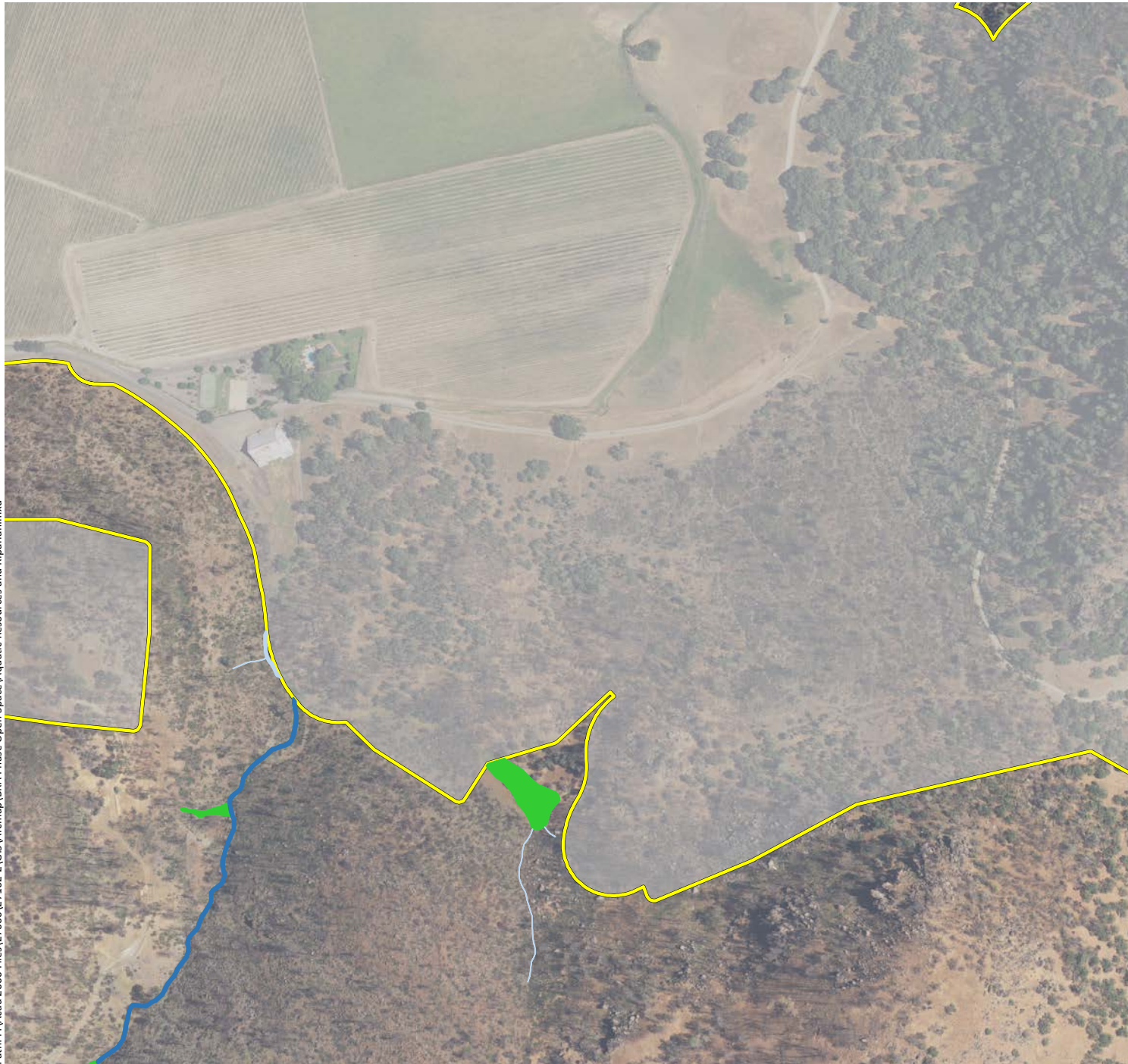


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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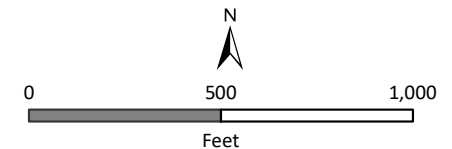


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 31)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

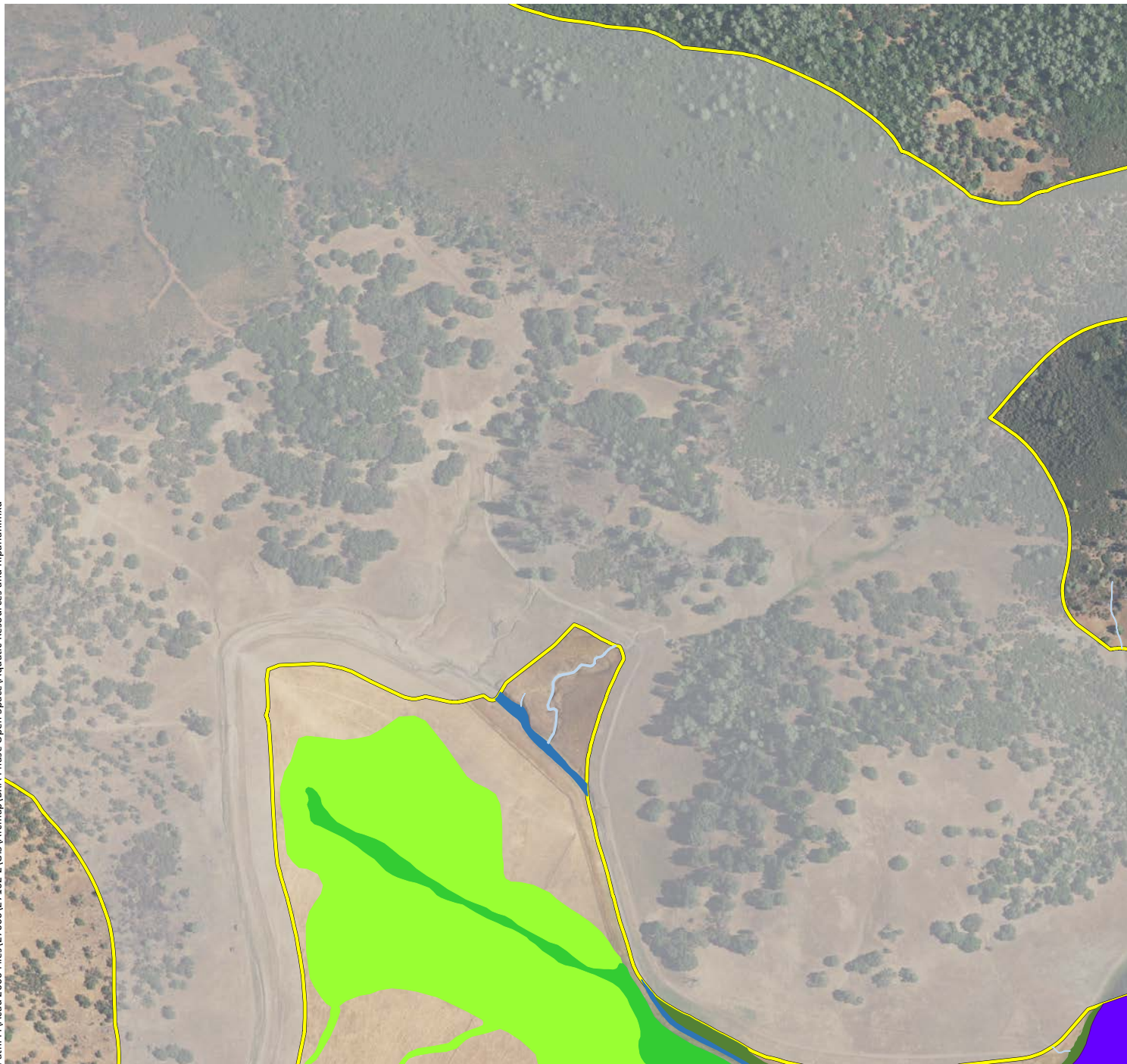


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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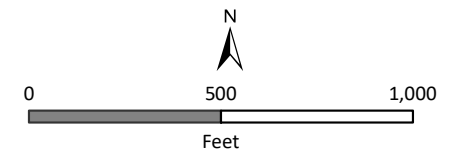


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 32)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

|                                                                                       |                                              |
|---------------------------------------------------------------------------------------|----------------------------------------------|
|    | Phase 1 Study Area - 11,549 ac.              |
|    | Riparian Woodland - 34.11 ac.                |
| <b><u>Wetlands - 330.00 ac.</u></b>                                                   |                                              |
|    | Forested Wetlands - 1.33 ac.                 |
|    | Scrub-Shrub Wetlands - 1.15 ac.              |
|    | Seasonal Wetland Depressions - 53.85 ac.     |
|    | Seasonal Wetland Ditches - 0.62 ac.          |
|    | Seasonal Wetland Pond Fringes - 0.01 ac.     |
|    | Seasonal Wetland Seeps/Swales - 157.86 ac.   |
|    | Seasonal Wetland Wet Meadows - 66.11 ac.     |
|    | Stream Fringe/In-Stream Wetlands - 49.07 ac. |
| <b><u>Waters* - 773.93 ac. &amp; 735,754 LF</u></b>                                   |                                              |
|    | Ephemeral Ditches - 0.03 ac. & 942 LF        |
|   | Ephemeral Streams - 33.35 ac. & 610,691 LF   |
|  | Intermittent Streams - 14.93 ac. & 58,059 LF |
|  | Perennial Streams - 99.54 ac. & 66,062 LF    |
|  | Open Waters - 626.08 ac.                     |

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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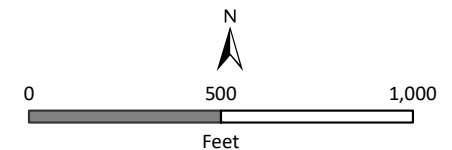


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 33)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

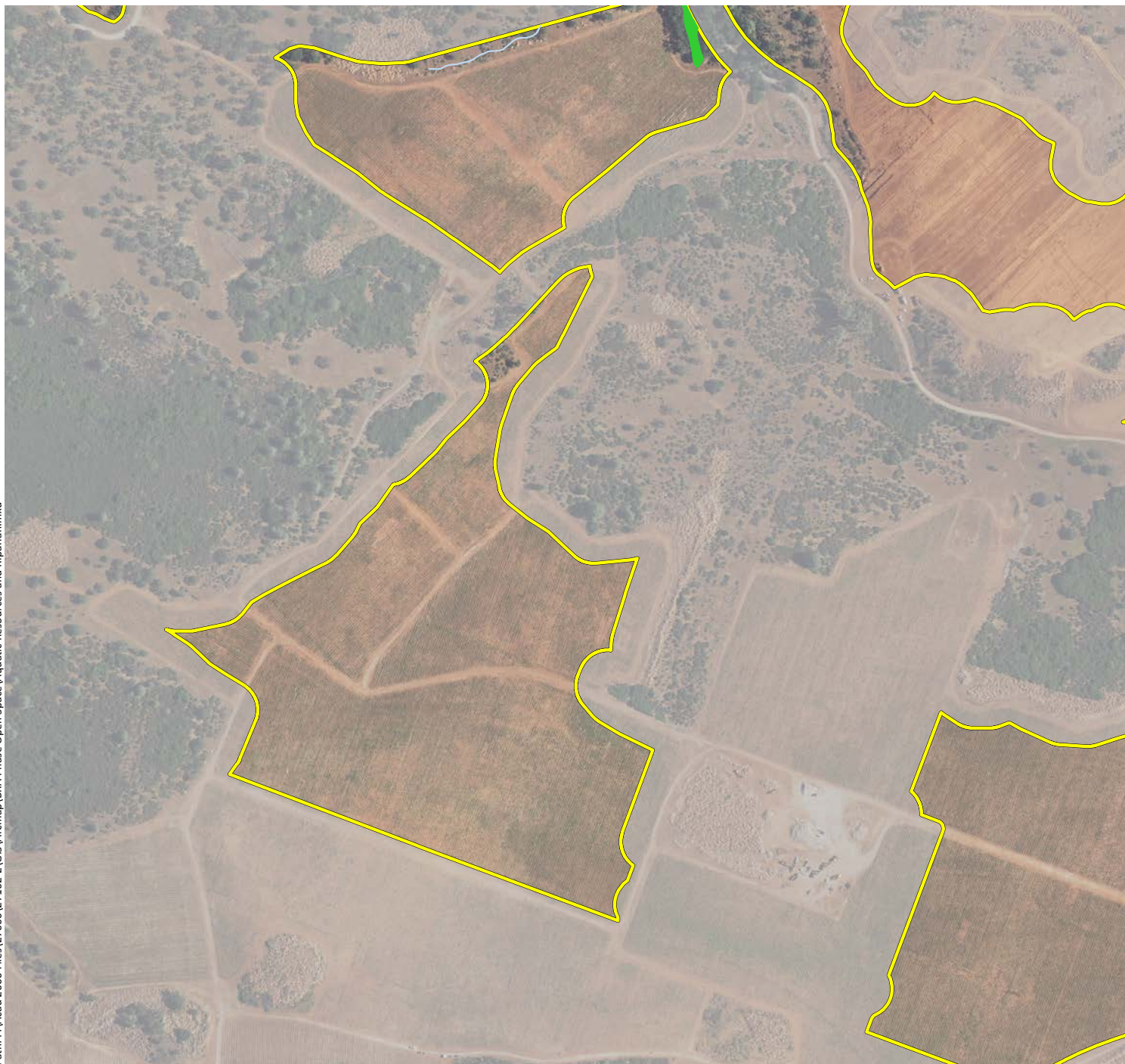


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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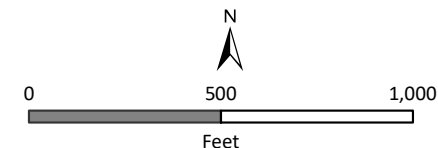


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 34)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 35)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### Wetlands - 330.00 ac.

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### Waters\* - 773.93 ac. & 735,754 LF

 Ephemeral Ditches - 0.03 ac. & 942 LF

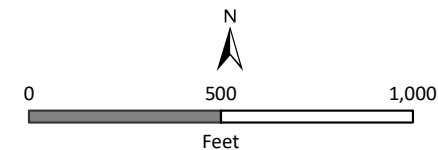
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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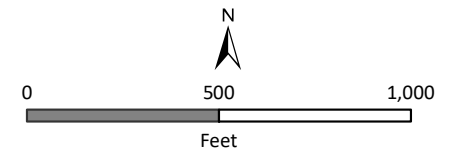


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 36)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

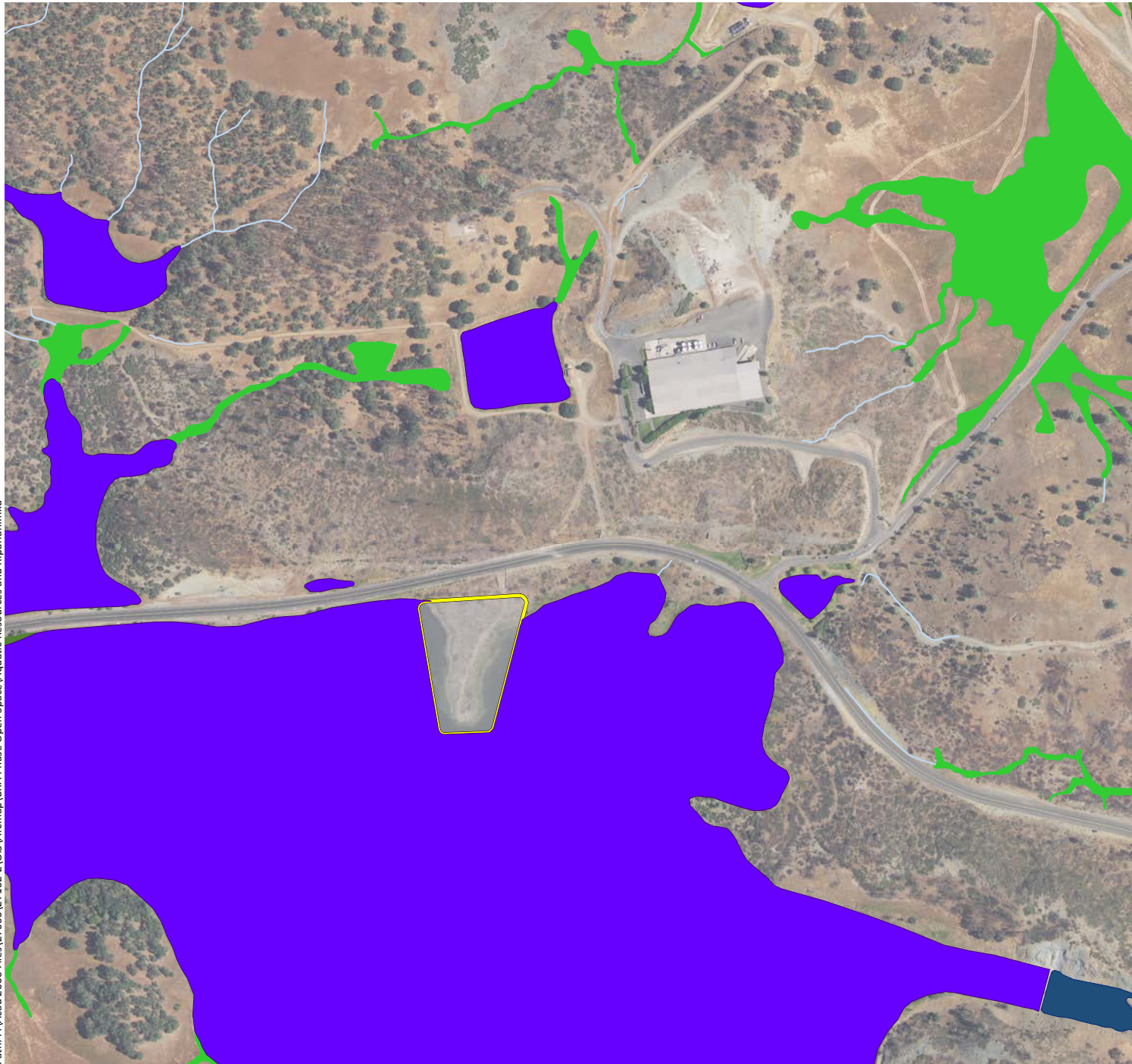


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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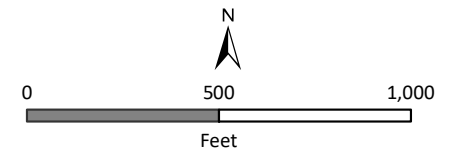


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 37)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

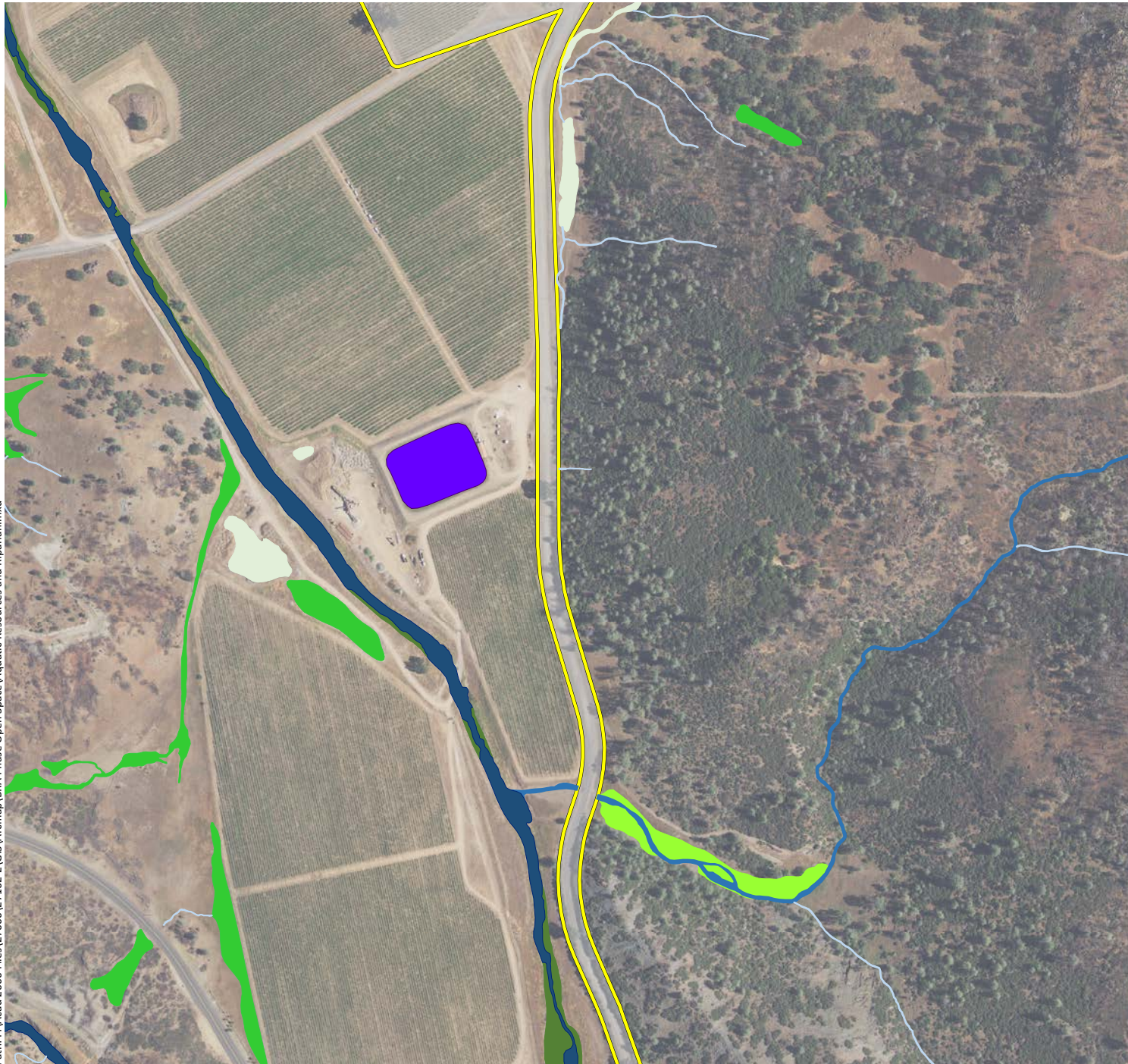
|                                                                                       |                                              |
|---------------------------------------------------------------------------------------|----------------------------------------------|
|    | Phase 1 Study Area - 11,549 ac.              |
|    | Riparian Woodland - 34.11 ac.                |
| <b><u>Wetlands - 330.00 ac.</u></b>                                                   |                                              |
|    | Forested Wetlands - 1.33 ac.                 |
|    | Scrub-Shrub Wetlands - 1.15 ac.              |
|    | Seasonal Wetland Depressions - 53.85 ac.     |
|    | Seasonal Wetland Ditches - 0.62 ac.          |
|    | Seasonal Wetland Pond Fringes - 0.01 ac.     |
|    | Seasonal Wetland Seeps/Swales - 157.86 ac.   |
|    | Seasonal Wetland Wet Meadows - 66.11 ac.     |
|    | Stream Fringe/In-Stream Wetlands - 49.07 ac. |
| <b><u>Waters* - 773.93 ac. &amp; 735,754 LF</u></b>                                   |                                              |
|    | Ephemeral Ditches - 0.03 ac. & 942 LF        |
|   | Ephemeral Streams - 33.35 ac. & 610,691 LF   |
|  | Intermittent Streams - 14.93 ac. & 58,059 LF |
|  | Perennial Streams - 99.54 ac. & 66,062 LF    |
|  | Open Waters - 626.08 ac.                     |

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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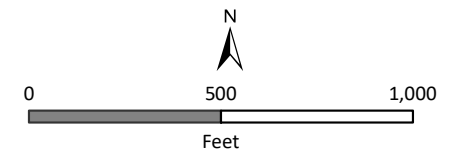


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 38)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

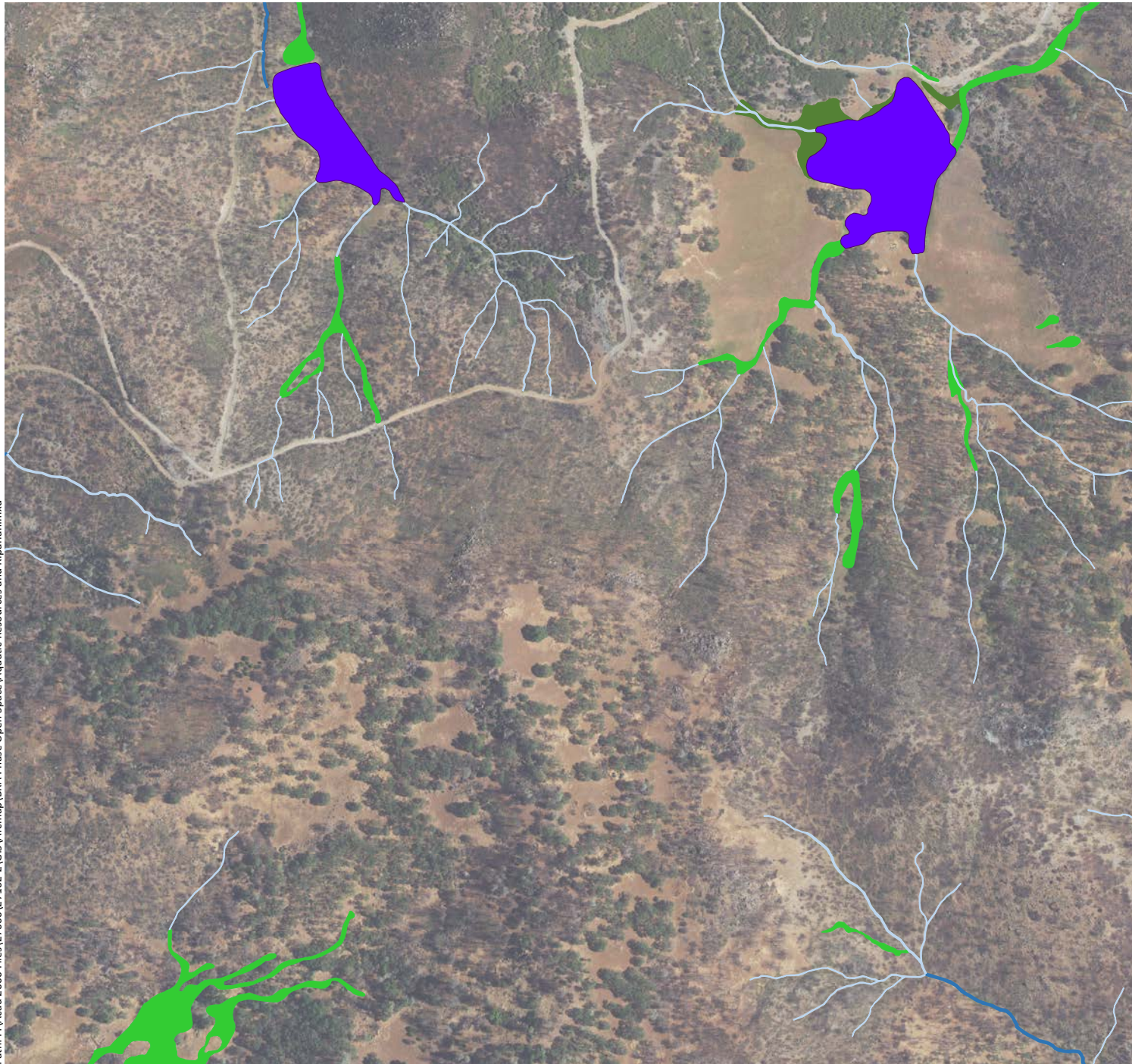


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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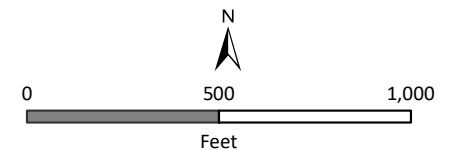


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 39)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark





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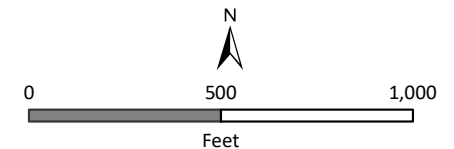


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 40)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

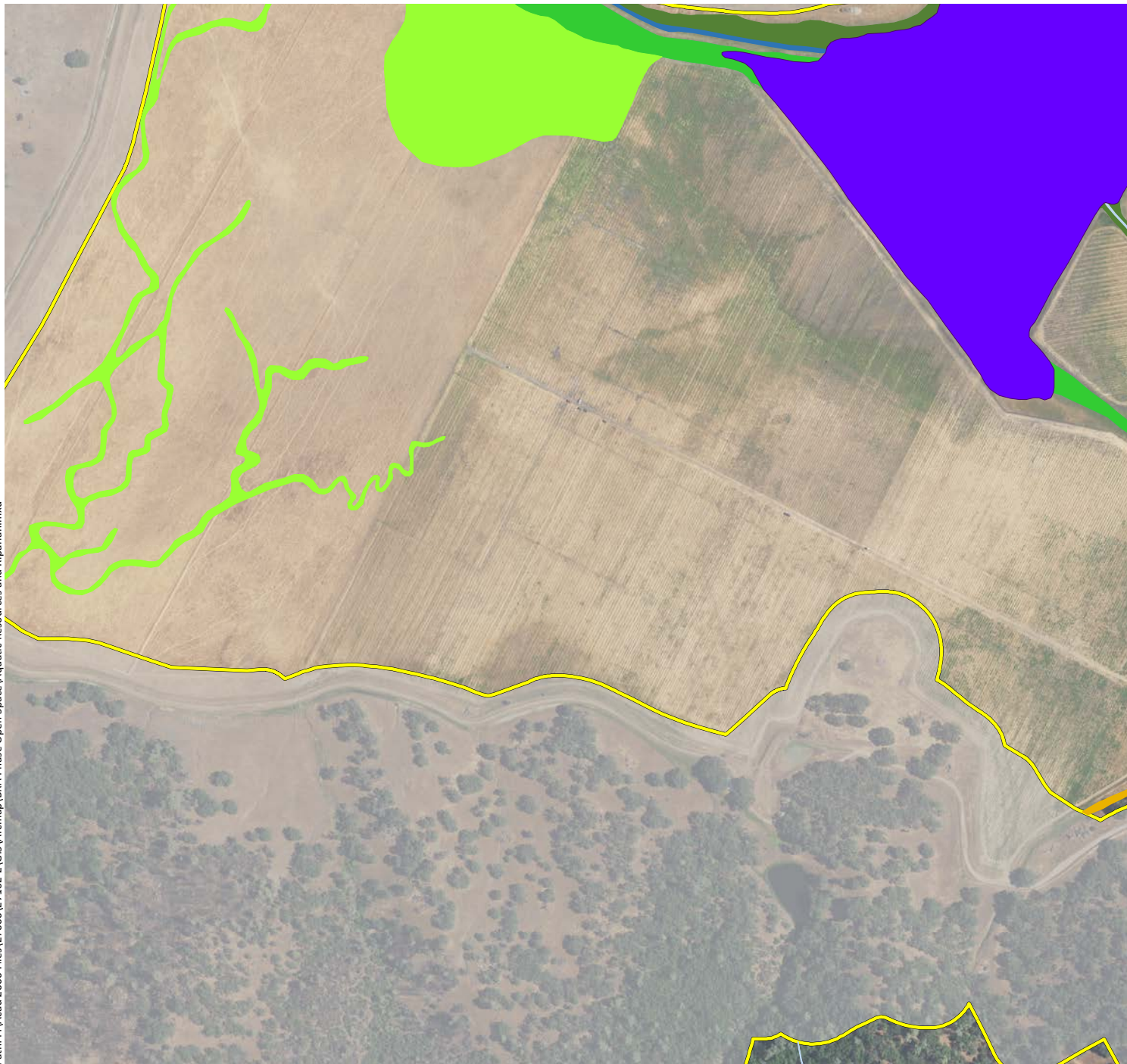


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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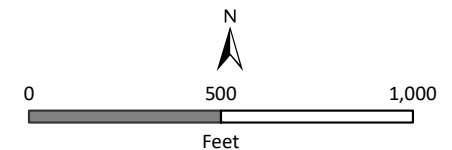


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 41)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

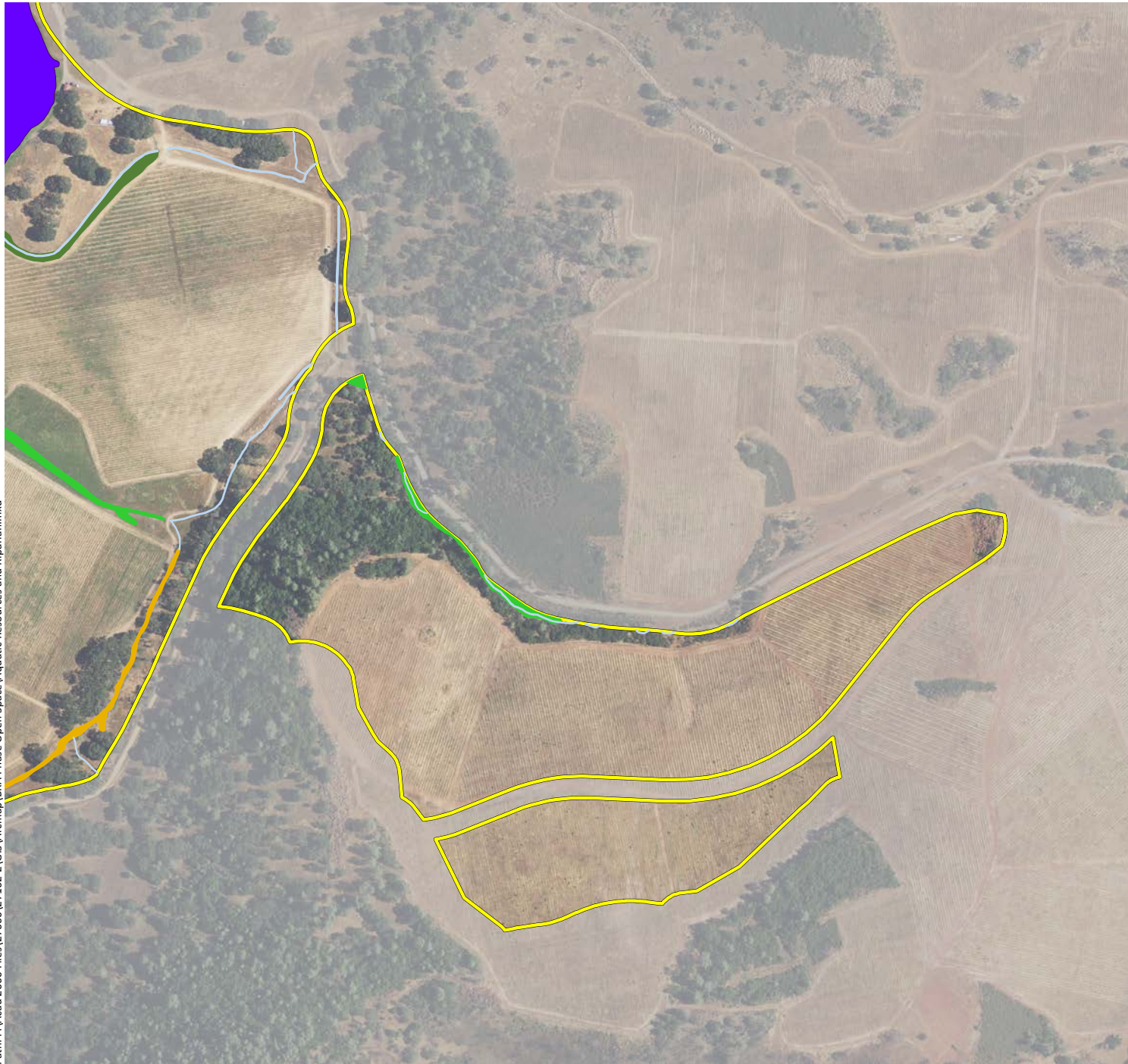
|                                                                                       |                                              |
|---------------------------------------------------------------------------------------|----------------------------------------------|
|    | Phase 1 Study Area - 11,549 ac.              |
|    | Riparian Woodland - 34.11 ac.                |
| <b><u>Wetlands - 330.00 ac.</u></b>                                                   |                                              |
|    | Forested Wetlands - 1.33 ac.                 |
|    | Scrub-Shrub Wetlands - 1.15 ac.              |
|    | Seasonal Wetland Depressions - 53.85 ac.     |
|    | Seasonal Wetland Ditches - 0.62 ac.          |
|    | Seasonal Wetland Pond Fringes - 0.01 ac.     |
|    | Seasonal Wetland Seeps/Swales - 157.86 ac.   |
|    | Seasonal Wetland Wet Meadows - 66.11 ac.     |
|    | Stream Fringe/In-Stream Wetlands - 49.07 ac. |
| <b><u>Waters* - 773.93 ac. &amp; 735,754 LF</u></b>                                   |                                              |
|    | Ephemeral Ditches - 0.03 ac. & 942 LF        |
|   | Ephemeral Streams - 33.35 ac. & 610,691 LF   |
|  | Intermittent Streams - 14.93 ac. & 58,059 LF |
|  | Perennial Streams - 99.54 ac. & 66,062 LF    |
|  | Open Waters - 626.08 ac.                     |

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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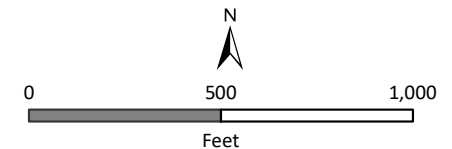


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 42)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

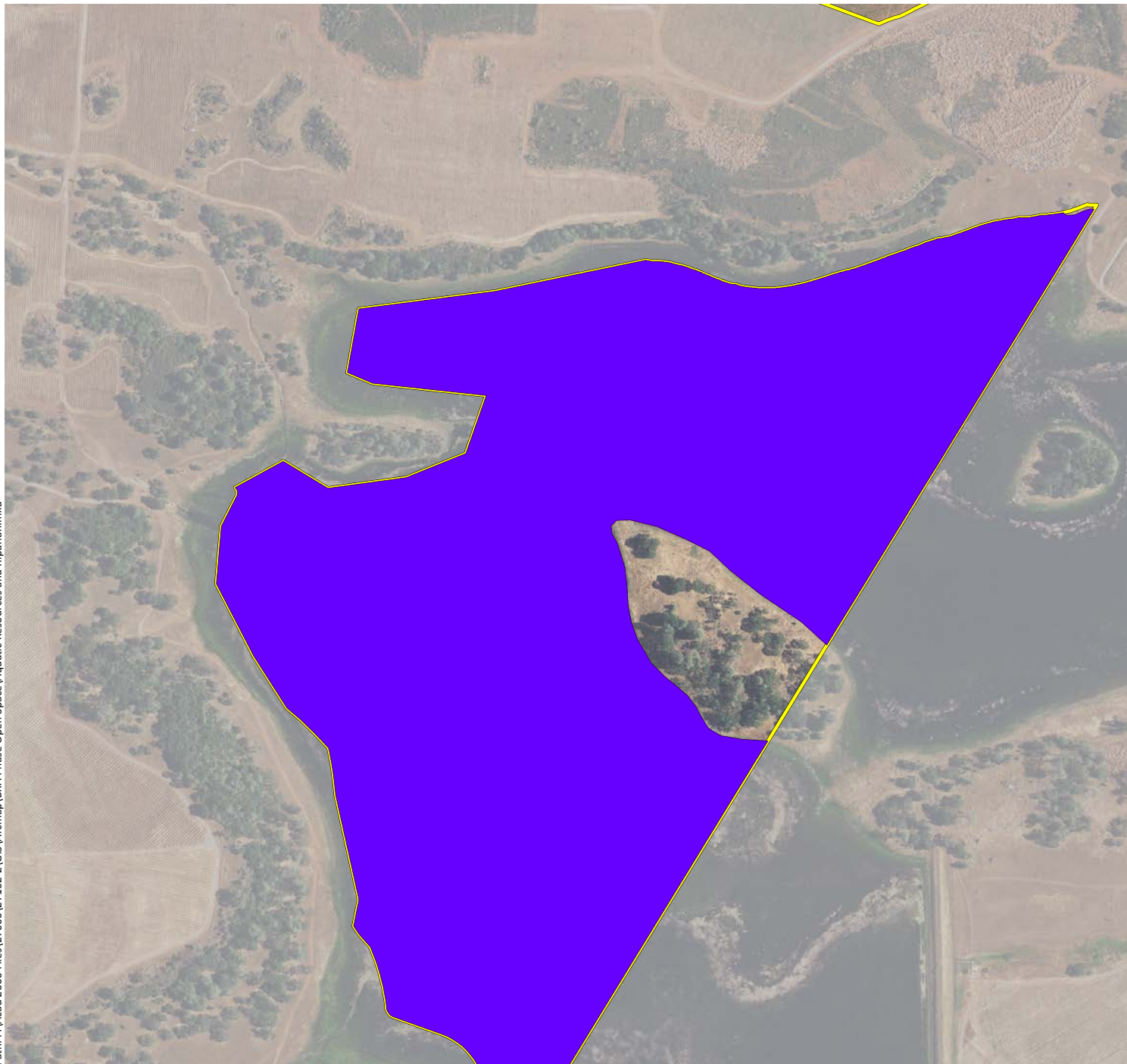


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 43)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

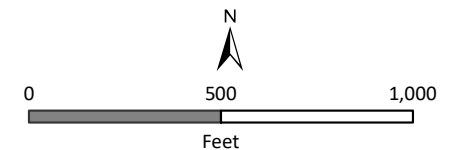
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

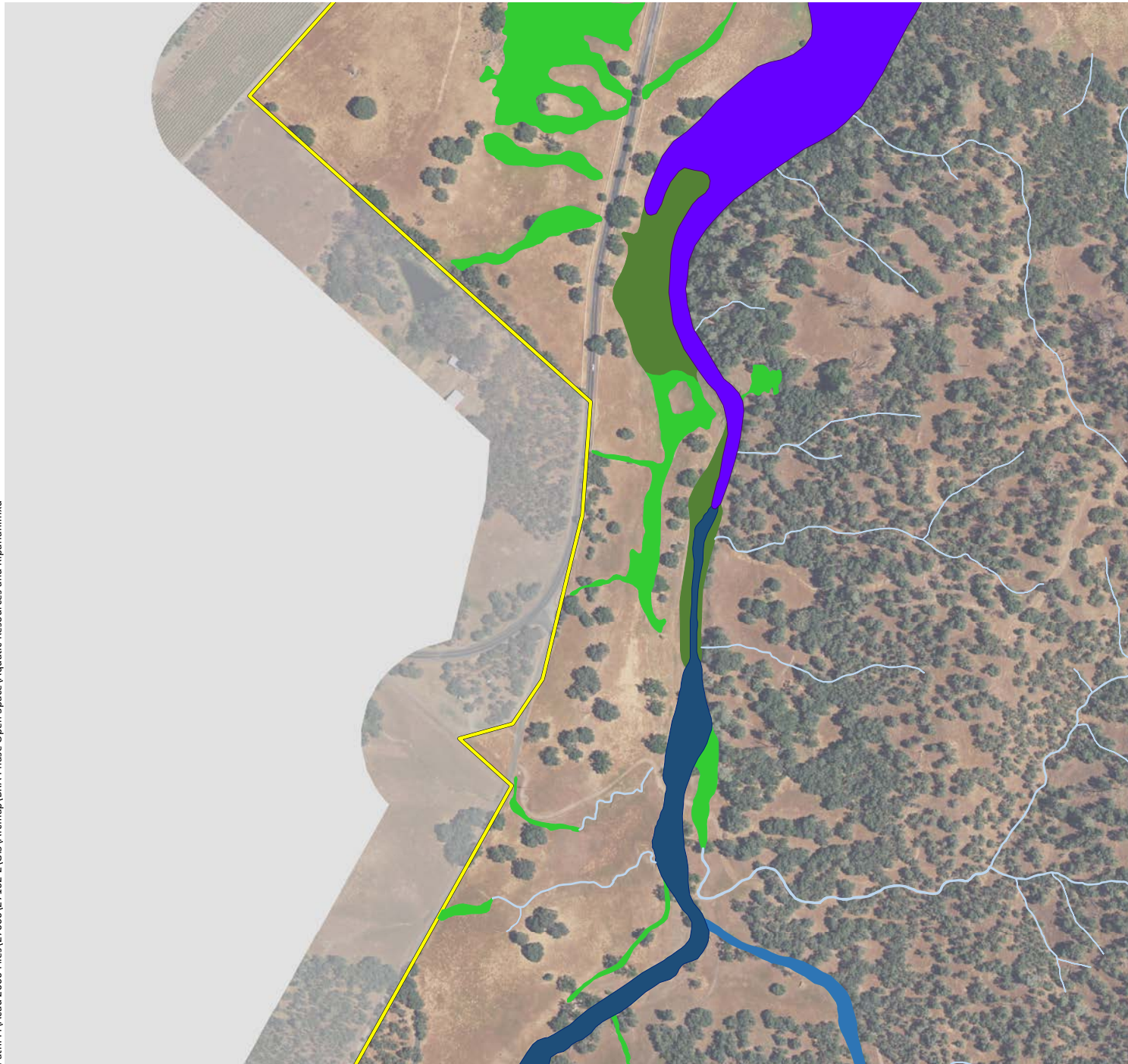
 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark



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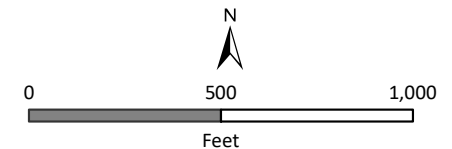


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 44)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

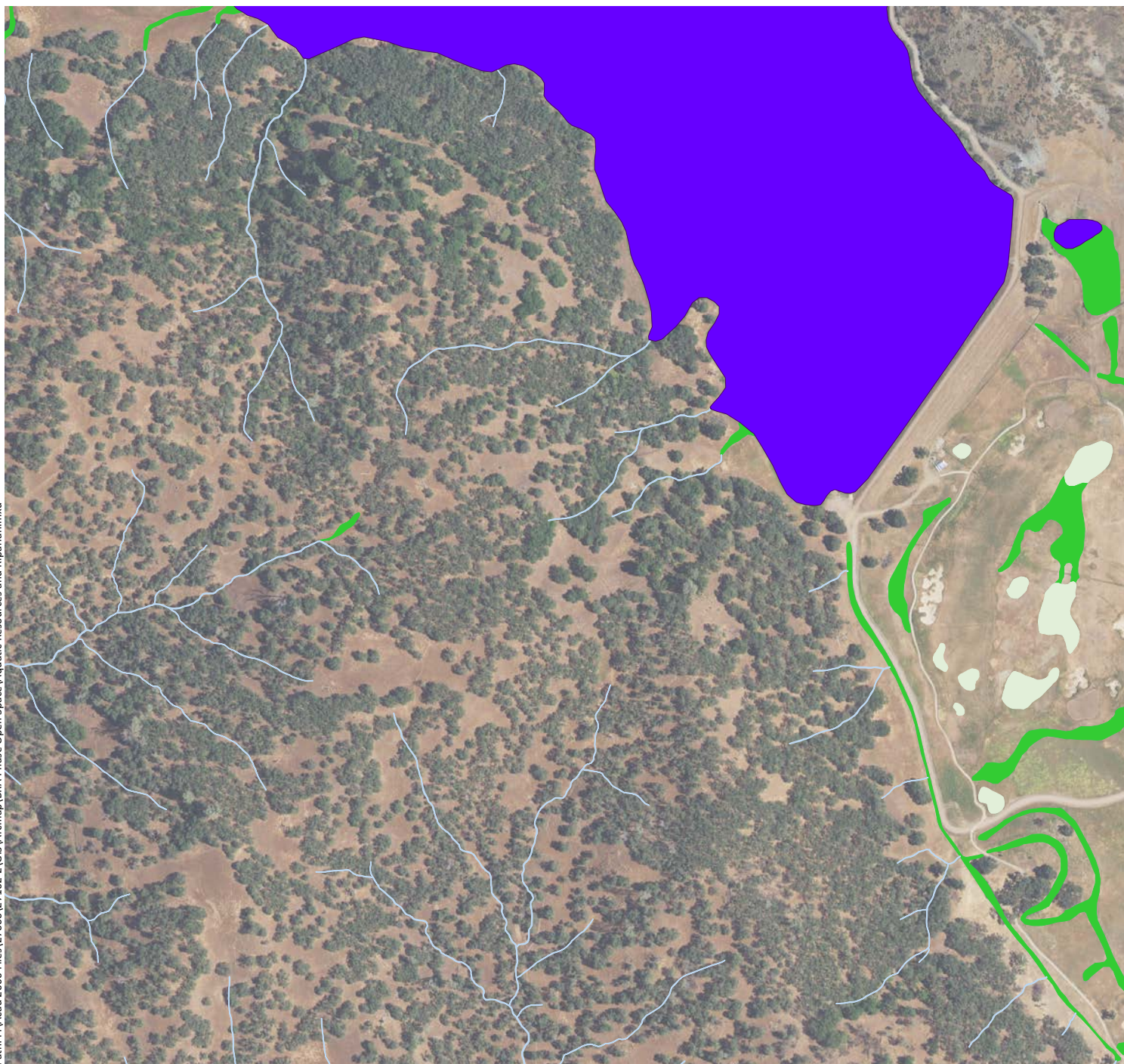


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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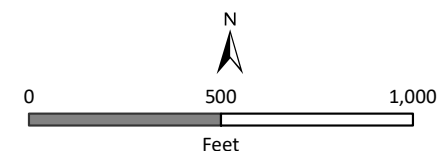


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 45)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

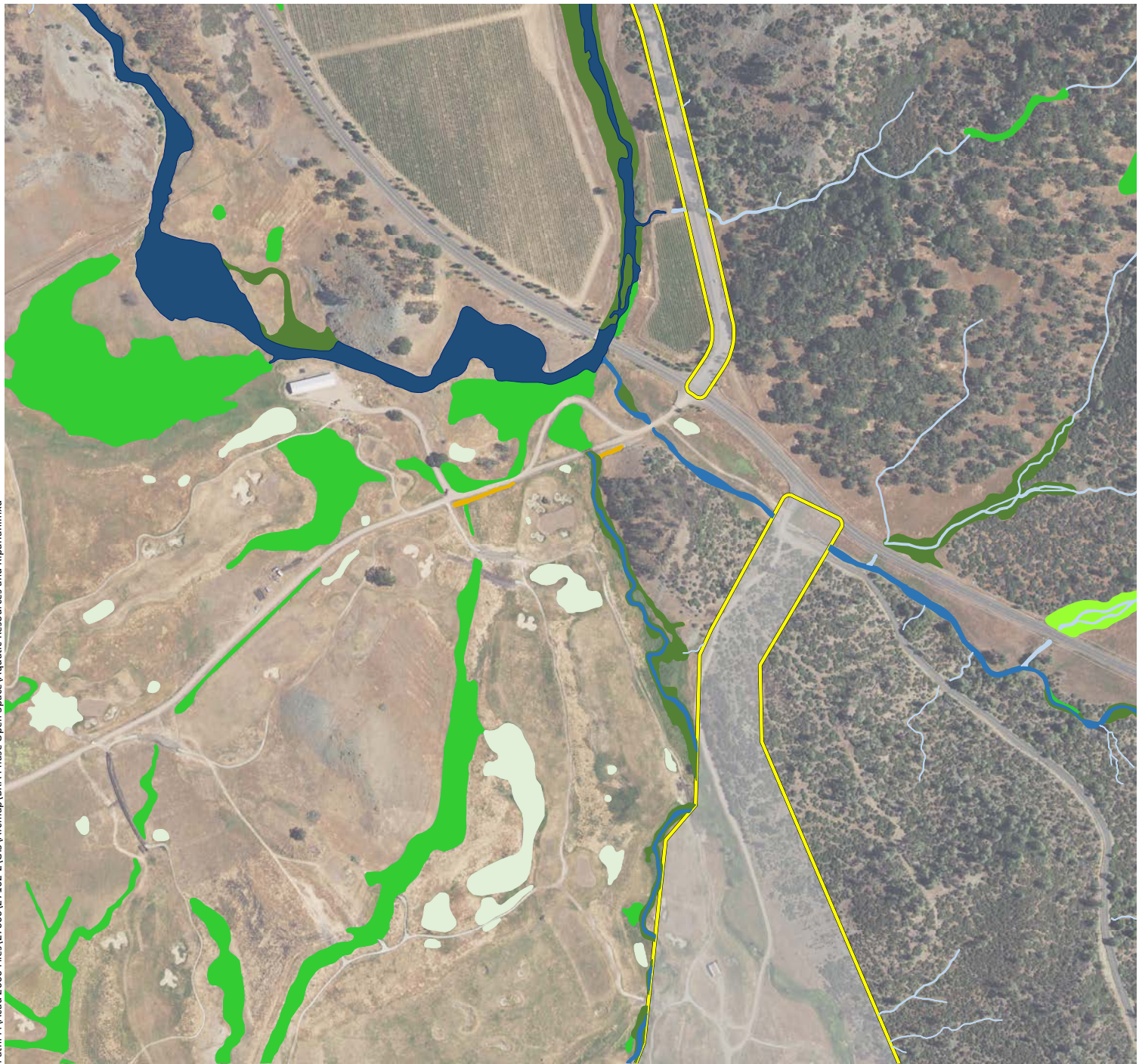


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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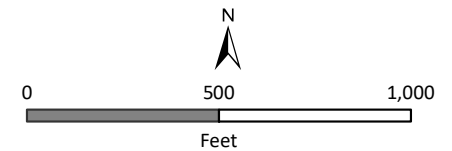


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 46)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

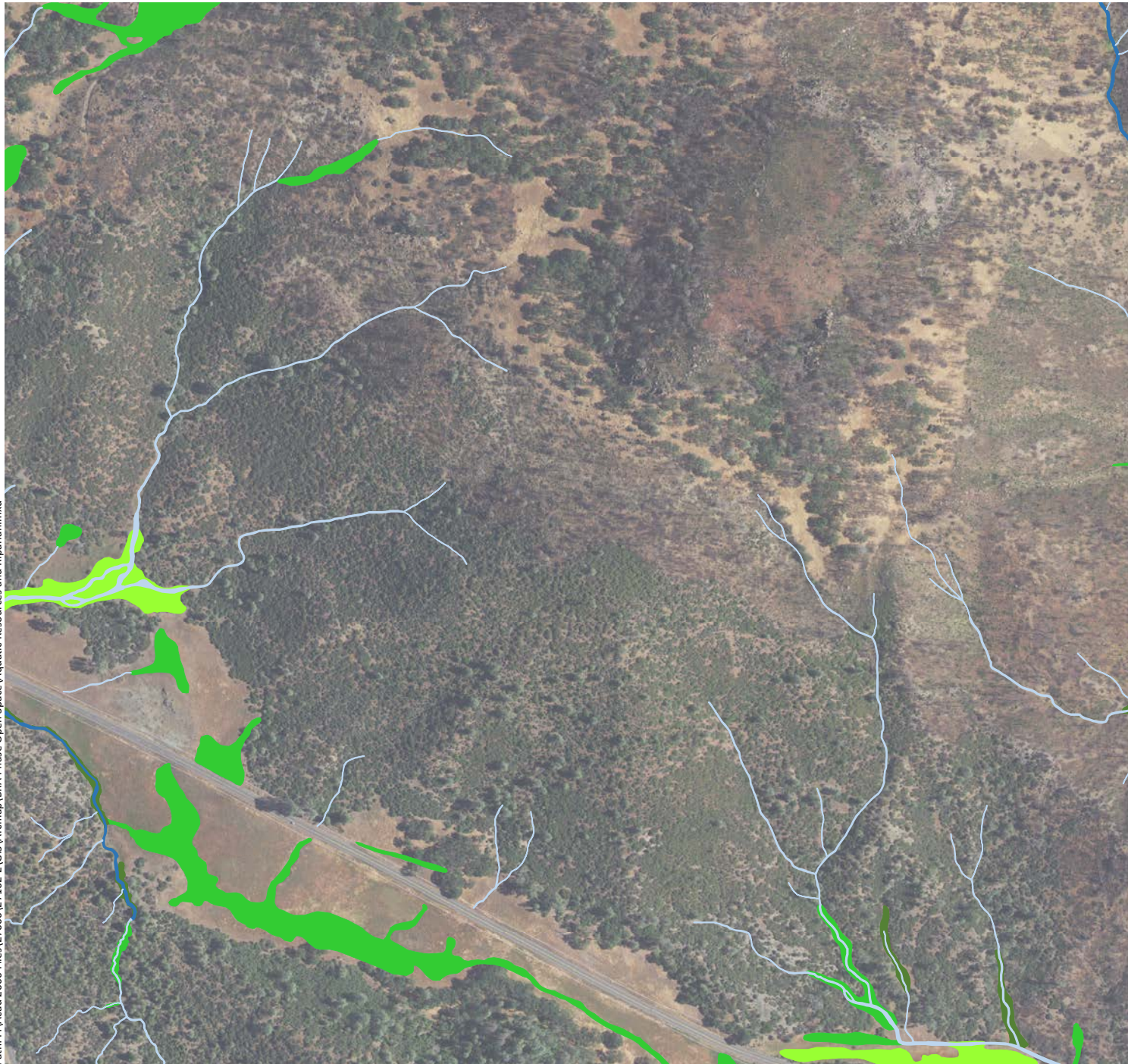


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 47)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

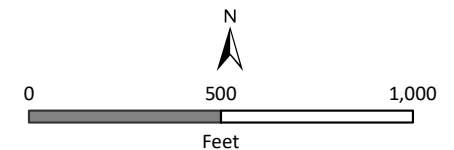
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

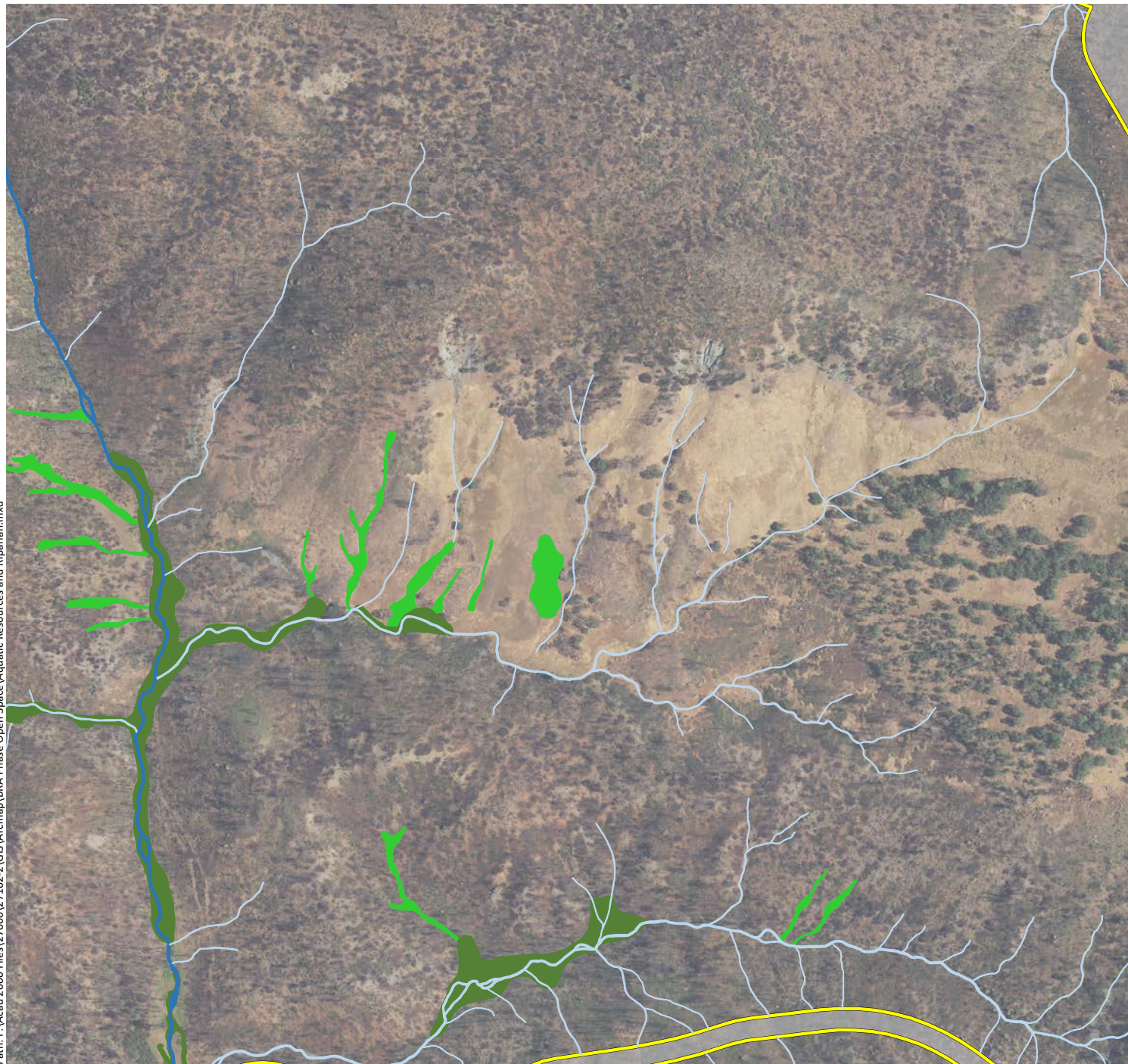
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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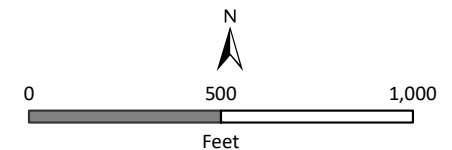


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 48)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



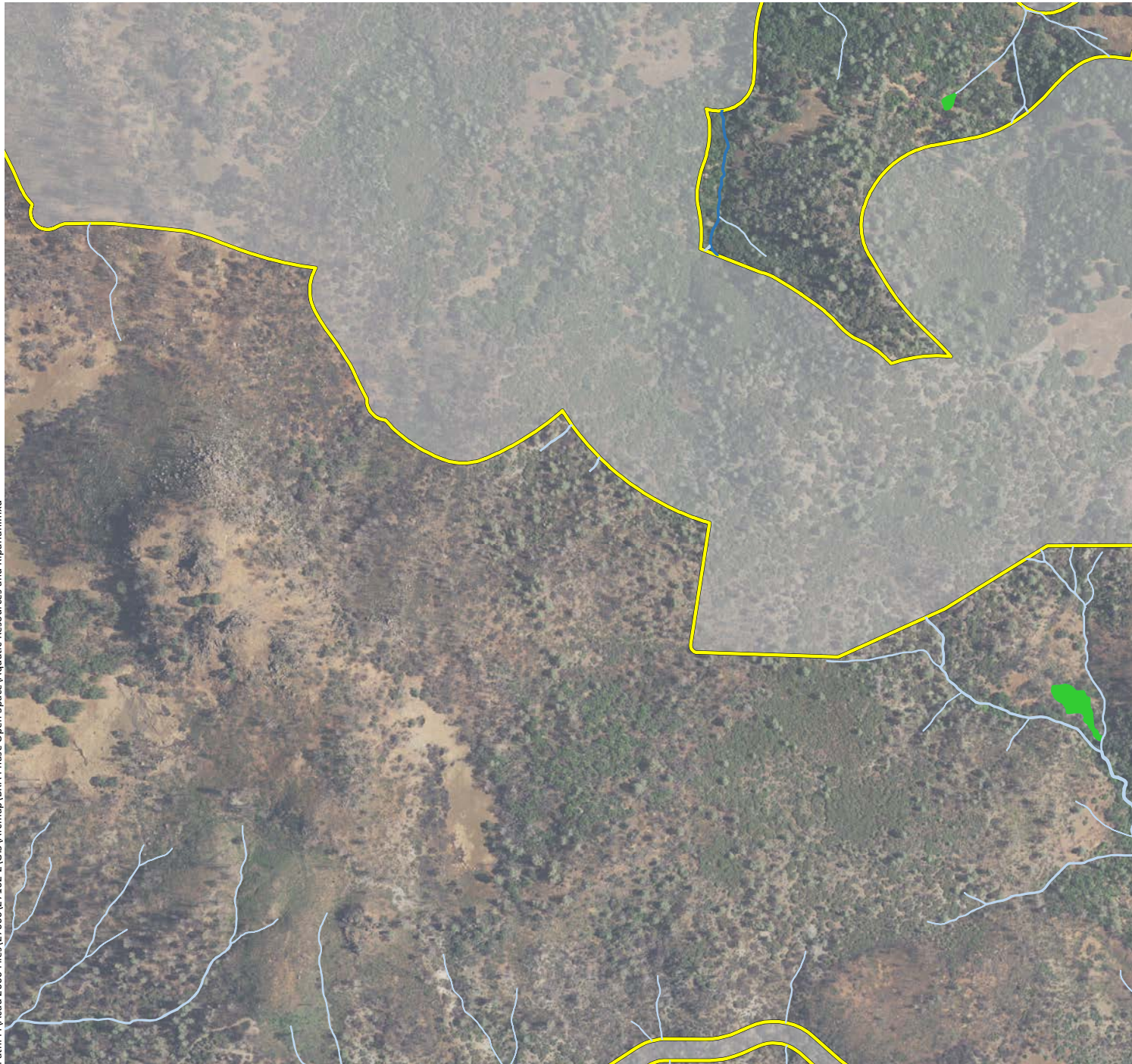
\* The extent of waters shown is based on  
the location of the ordinary high water mark



Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 49)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

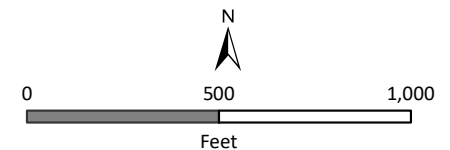
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

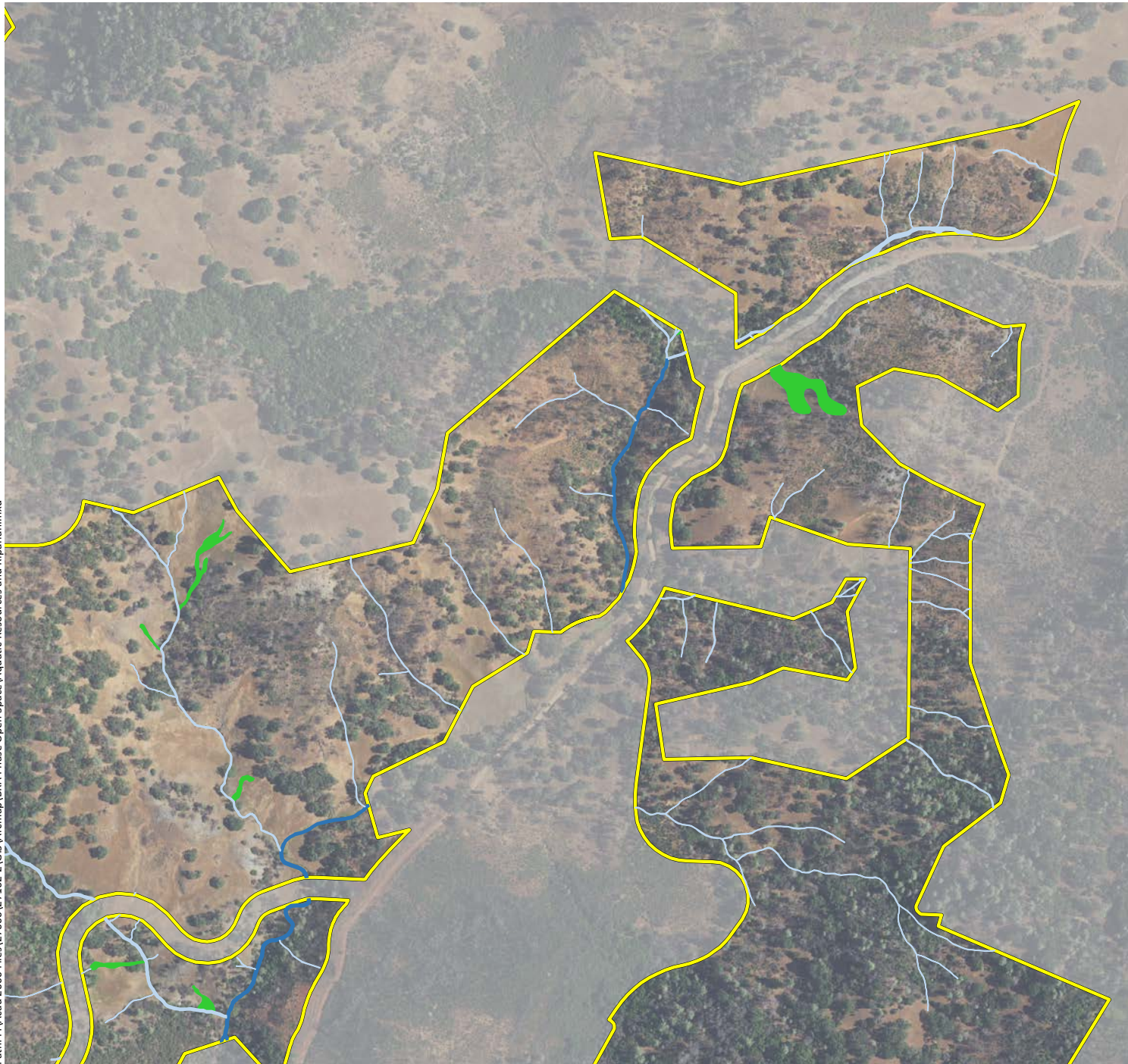
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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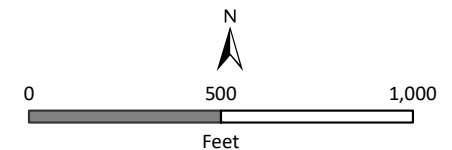


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 50)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

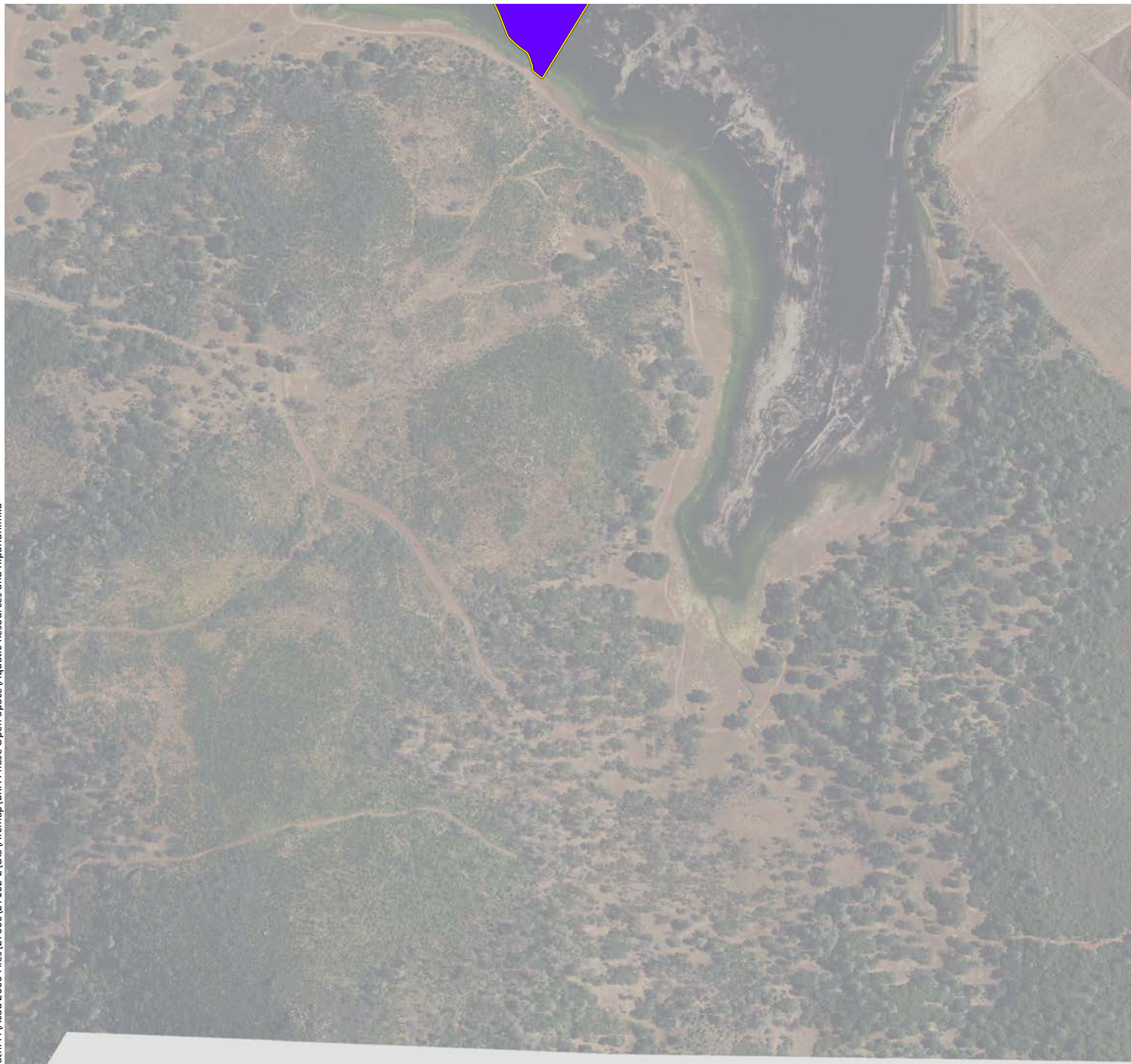


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 51)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

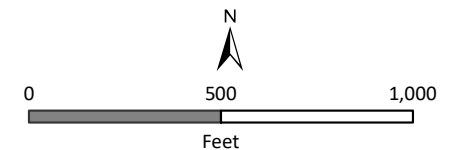
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 52)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

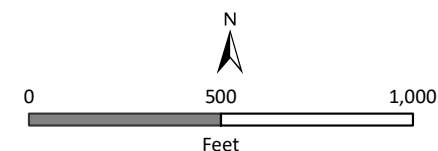
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark



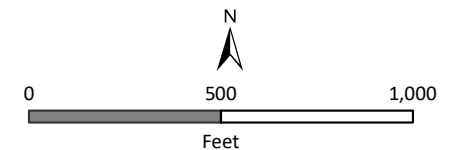


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 53)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark

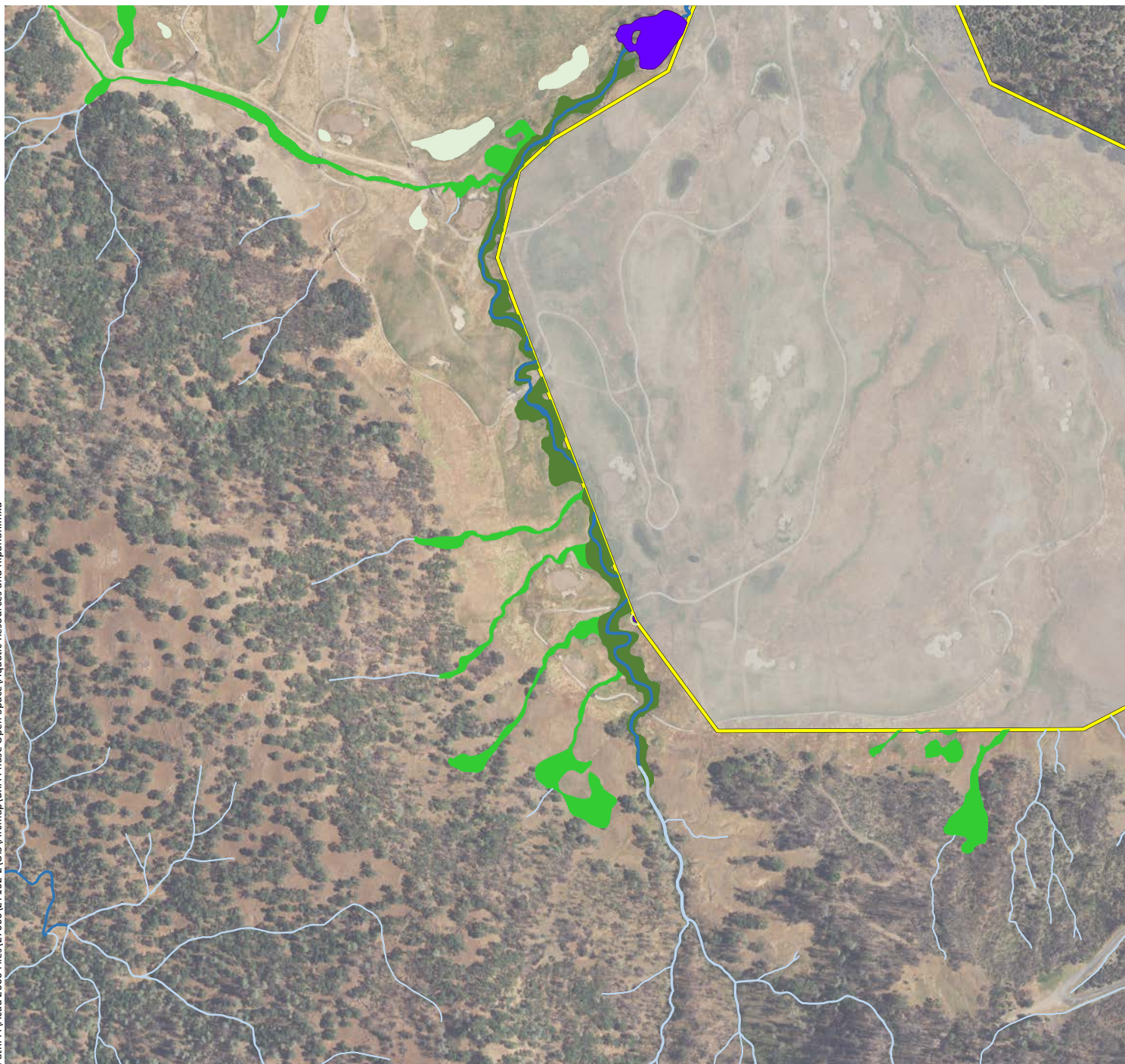


Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Aquatic Resources and Riparian.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 1/8/2020



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Aquatic Resources and Riparian.mxd



## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 54)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

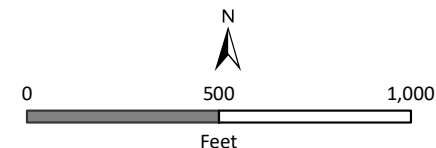
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

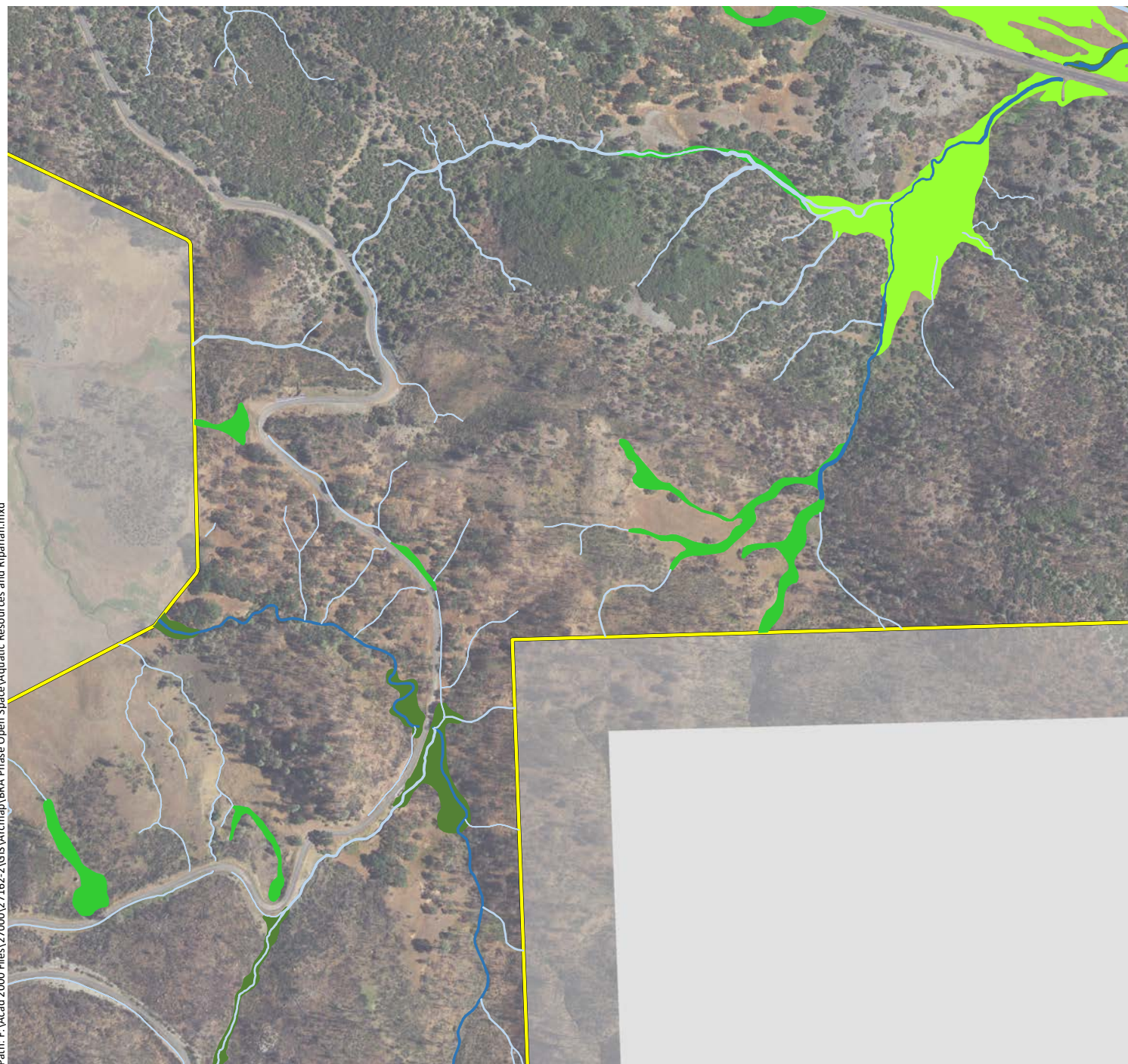
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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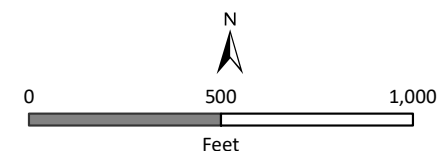


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 55)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

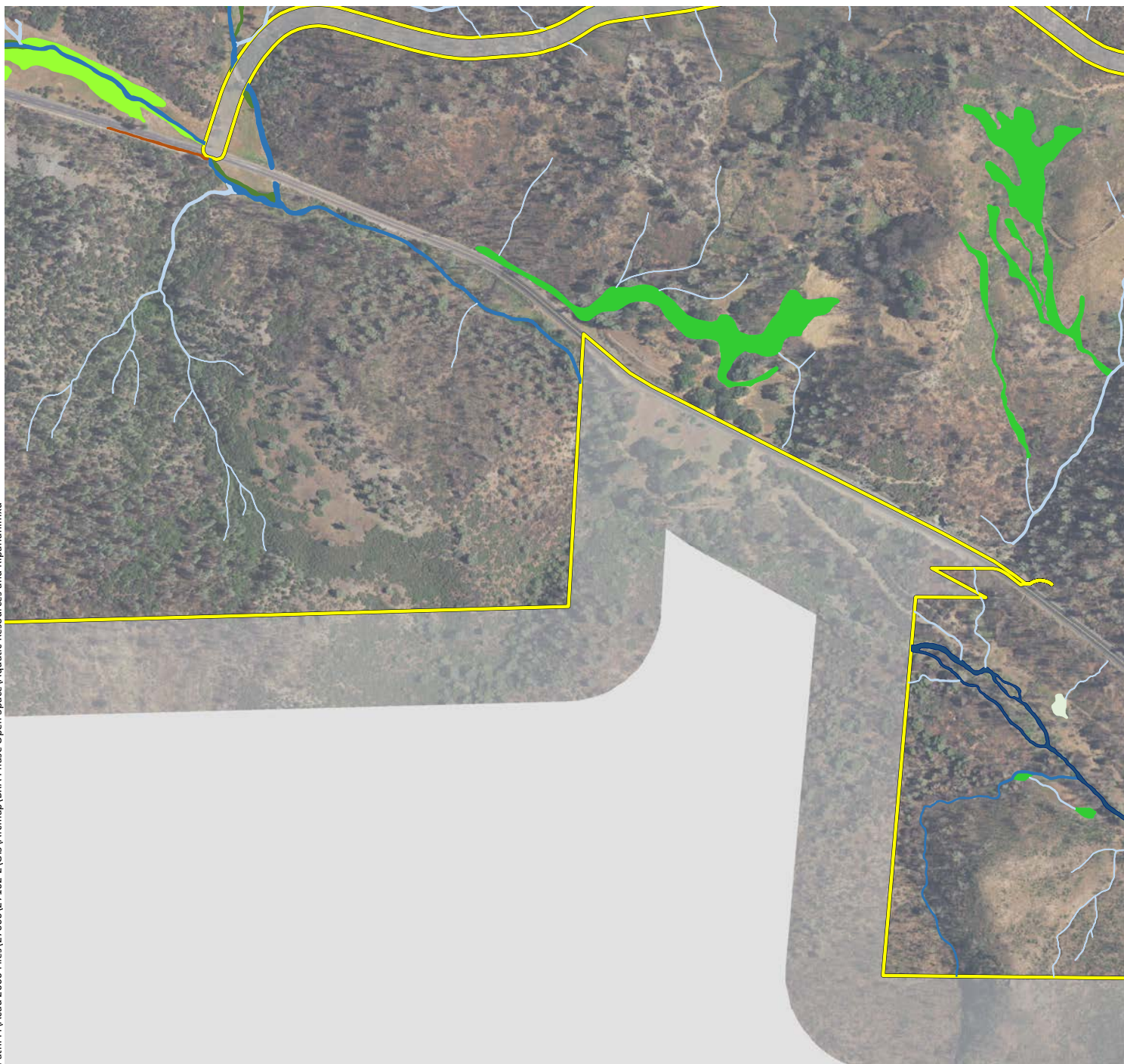


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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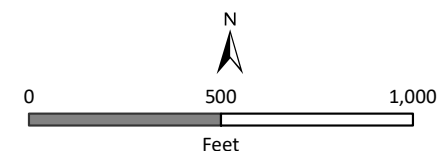


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 56)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

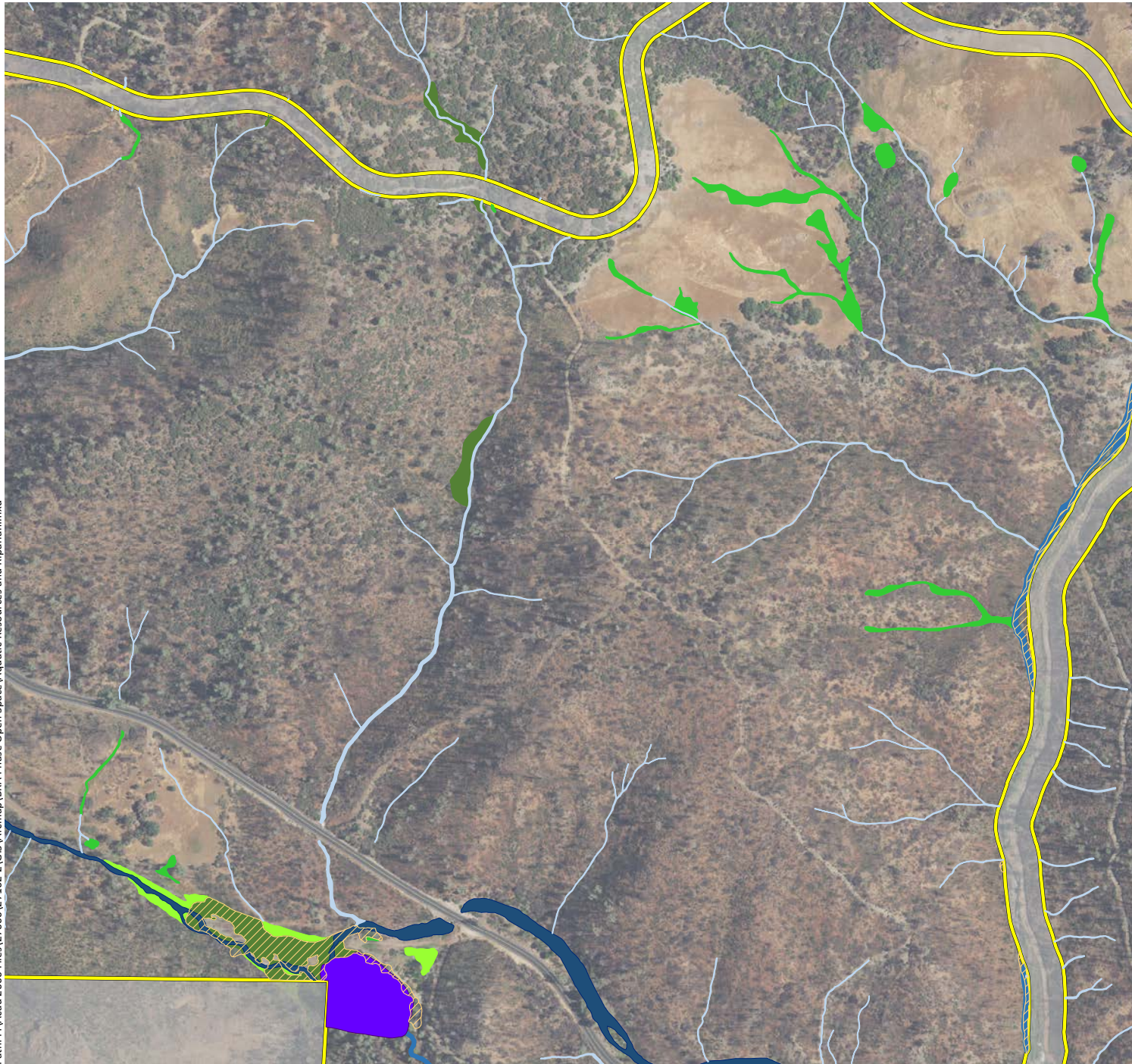


\* The extent of waters shown is based on  
the location of the ordinary high water mark



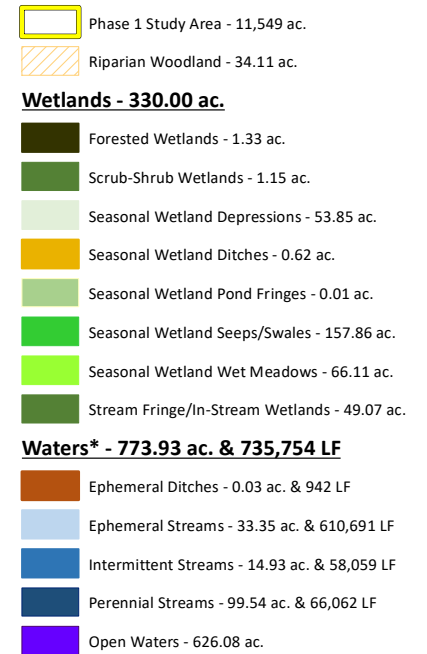


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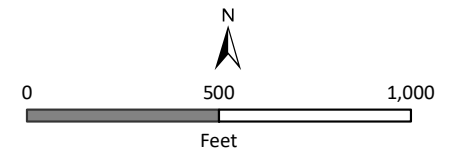


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 57)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

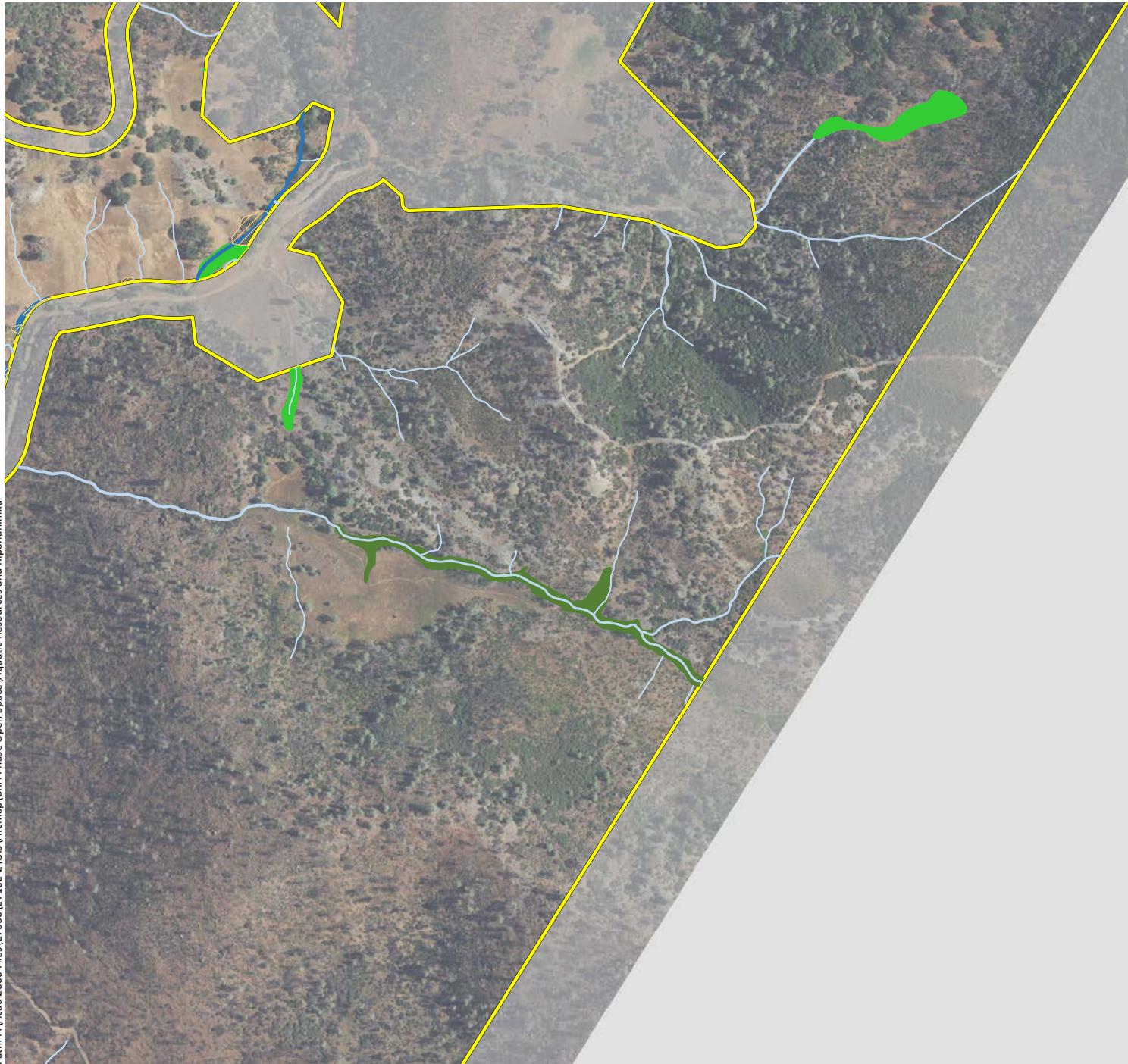


\* The extent of waters shown is based on  
the location of the ordinary high water mark





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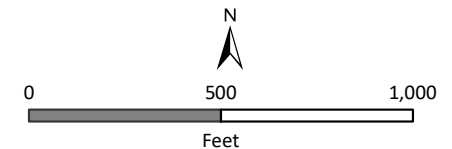


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 58)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark







## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 59)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

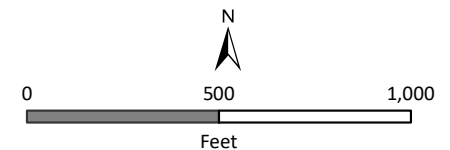
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

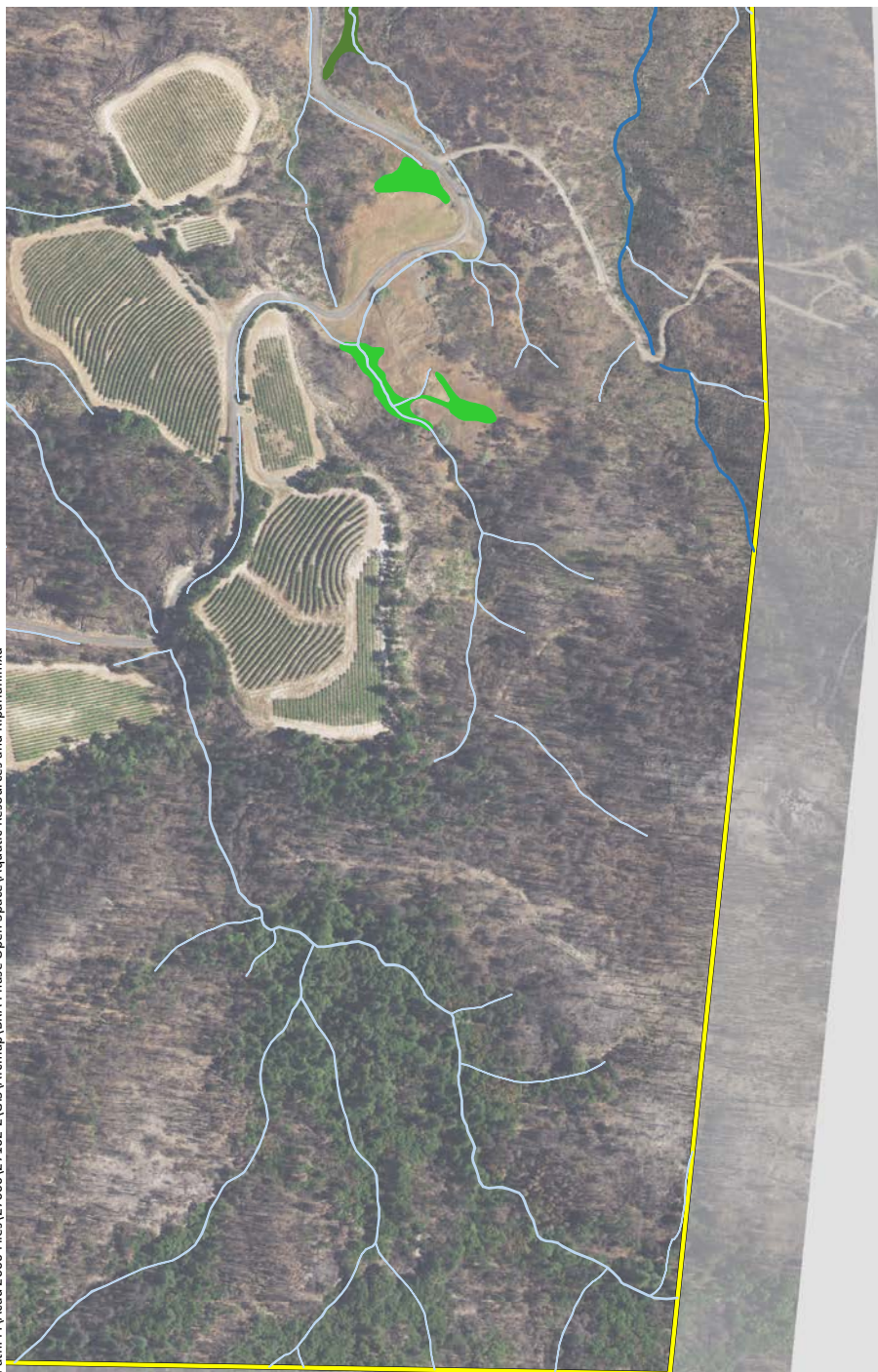
 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 60)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### Wetlands - 330.00 ac.

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### Waters\* - 773.93 ac. & 735,754 LF

 Ephemeral Ditches - 0.03 ac. & 942 LF

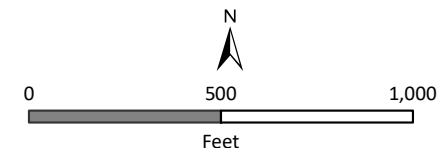
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark



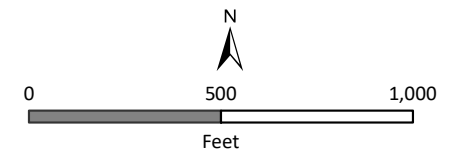


## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 61)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space



\* The extent of waters shown is based on  
the location of the ordinary high water mark



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## Appendix B. Aquatic Resources and Riparian Habitat Mapped within the Phase 2 and Open Space Study Area (Mapbook Sheet 62)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 Phase 1 Study Area - 11,549 ac.

 Riparian Woodland - 34.11 ac.

### **Wetlands - 330.00 ac.**

 Forested Wetlands - 1.33 ac.

 Scrub-Shrub Wetlands - 1.15 ac.

 Seasonal Wetland Depressions - 53.85 ac.

 Seasonal Wetland Ditches - 0.62 ac.

 Seasonal Wetland Pond Fringes - 0.01 ac.

 Seasonal Wetland Seeps/Swales - 157.86 ac.

 Seasonal Wetland Wet Meadows - 66.11 ac.

 Stream Fringe/In-Stream Wetlands - 49.07 ac.

### **Waters\* - 773.93 ac. & 735,754 LF**

 Ephemeral Ditches - 0.03 ac. & 942 LF

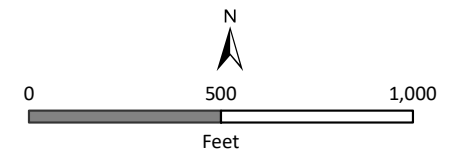
 Ephemeral Streams - 33.35 ac. & 610,691 LF

 Intermittent Streams - 14.93 ac. & 58,059 LF

 Perennial Streams - 99.54 ac. & 66,062 LF

 Open Waters - 626.08 ac.

\* The extent of waters shown is based on  
the location of the ordinary high water mark





## **APPENDIX C**

### **LIST OF PLANT SPECIES OBSERVED WITHIN GUENOC RANCH**





## Appendix C. 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 <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|----------------------------|-----------------------|-----------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Acer macrophyllum</i>                                | Bigleaf maple              | native                | tree            | -                                | -                           | FAC                         | -                                |
| <i>Achillea millefolium</i>                             | Yarrow                     | native                | perennial herb  | -                                | -                           | FACU                        | -                                |
| <i>Achyrachaena mollis</i>                              | Blow wives                 | native                | annual herb     | -                                | -                           | FAC                         | -                                |
| <i>Acmispon americanus</i> var. <i>americanus</i>       | Spanish lotus              | native                | annual herb     | -                                | -                           | UPL                         | -                                |
| <i>Acmispon brachycarpus</i>                            | Short podded lotus         | native                | annual herb     | -                                | -                           | -                           | -                                |
| <i>Acmispon glaber</i> var. <i>glaber</i>               | Deerweed                   | native                | perennial herb  | -                                | -                           | -                           | -                                |
| <i>Acmispon parviflorus</i>                             | Hill lotus                 | native                | annual herb     | -                                | -                           | -                           | -                                |
| <i>Acmispon wrangelianus</i>                            | Chilean trefoil            | native                | annual herb     | -                                | -                           | -                           | -                                |
| <i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i> | Chamise                    | native                | tree, shrub     | -                                | -                           | -                           | -                                |
| <i>Adiantum jordanii</i>                                | California maidenhair fern | native                | fern            | -                                | -                           | FAC                         | -                                |
| <i>Aegilops triuncialis</i>                             | Goatgrass                  | non-native (invasive) | annual grass    | -                                | High                        | -                           | -                                |
| <i>Aesculus californica</i>                             | Buckeye                    | native                | tree            | -                                | -                           | -                           | -                                |
| <i>Agoseris grandiflora</i> var. <i>grandiflora</i>     | Giant mountain dandelion   | native                | perennial herb  | -                                | -                           | -                           | -                                |
| <i>Agoseris heterophylla</i> var. <i>cryptopleura</i>   | Mountain dandelion         | native                | annual herb     | -                                | -                           | -                           | -                                |
| <i>Agoseris heterophylla</i> var. <i>heterophylla</i>   | Annual agoseris            | native                | annual herb     | -                                | -                           | -                           | -                                |
| <i>Agrostis avenacea</i>                                | Pacific bentgrass          | non-native (invasive) | perennial grass | -                                | Limited                     | FACW                        | -                                |
| <i>Agrostis stolonifera</i>                             | Redtop                     | non-native (invasive) | perennial grass | -                                | Limited                     | FACW                        | -                                |
| <i>Aira caryophyllea</i>                                | Silvery hairgrass          | non-native            | annual grass    | -                                | -                           | FACU                        | -                                |

| Scientific Name                                                      | Common Name         | Origin     | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------------------|---------------------|------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Alisma lanceolatum</i>                                            | Water plantain      | non-native | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Allium amplexans</i>                                              | Narrow leaved onion | native     | perennial herb (bulb)    | -                                | -                           | -                           | 2.3                              |
| <i>Allium falcifolium</i>                                            | Sickle leaf onion   | native     | perennial herb (bulb)    | -                                | -                           | -                           | 4.2                              |
| <i>Allium fimbriatum</i> var. <i>fimbriatum</i>                      | Fringed onion       | native     | perennial herb (bulb)    | -                                | -                           | -                           | -                                |
| <i>Allium serra</i>                                                  | Jeweled onion       | native     | perennial herb (bulb)    | -                                | -                           | -                           | 2.6                              |
| <i>Alnus rhombifolia</i>                                             | White alder         | native     | tree                     | -                                | -                           | FACW                        | -                                |
| <i>Alopecurus pratensis</i>                                          | Meadow foxtail      | non-native | perennial grass          | -                                | Watch                       | FACW                        | -                                |
| <i>Amaranthus retroflexus</i>                                        | Rough pigweed       | non-native | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Amsinckia intermedia</i>                                          | Common fiddleneck   | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Amsinckia lycopsoides</i>                                         | Tarweed fiddleneck  | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Amsinckia menziesii</i>                                           | Fiddleneck          | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Amsinckia retrorsa</i>                                            | Rigid fiddleneck    | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Ancistrocarphus filagineus</i>                                    | Woolly fishhooks    | native     | annual herb              | -                                | -                           | -                           | 3.3                              |
| <i>Angelica californica</i>                                          | California angelica | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Angelica tomentosa</i>                                            | Woolly angelica     | native     | perennial herb           | -                                | -                           | -                           | 2.7                              |
| <i>Anisocarpus madioides</i>                                         | Woodland madia      | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Anthemis cotula</i>                                               | Dog fennel          | non-native | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Antirrhinum vexillocalyculatum</i> ssp. <i>vexillocalyculatum</i> | Wiry snapdragon     | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Antirrhinum virga</i>                                             | Tall snapdragon     | native     | perennial herb           | Rank 4.3                         | -                           | -                           | 2.8                              |
| <i>Aphanes occidentalis</i>                                          | Ladie's mantle      | native     | annual, perennial herb   | -                                | -                           | -                           | -                                |



| Scientific Name                                          | Common Name                 | Origin | Form                       | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------|-----------------------------|--------|----------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Apiastrum angustifolium</i>                           | Wild celery                 | native | annual herb                | -                                | -                           | UPL                         | 1.5                              |
| <i>Aphyllon fasciculatum</i>                             | Clustered broomrape         | native | perennial herb (parasitic) | -                                | -                           | -                           | -                                |
| <i>Apocynum cannabinum</i>                               | Indian hemp                 | native | perennial herb             | -                                | -                           | FAC                         | -                                |
| <i>Aquilegia eximia</i>                                  | Serpentine columbine        | native | perennial herb             | -                                | -                           | OBL                         | 4.2                              |
| <i>Arbutus menziesii</i>                                 | Madrone                     | native | tree                       | -                                | -                           | -                           | -                                |
| <i>Arceuthobium campylopodum</i>                         | Pine dwarf mistletoe        | native | perennial herb (parasitic) | -                                | -                           | -                           | -                                |
| <i>Arctostaphylos glandulosa</i> ssp. <i>cushingiana</i> | Cushing manzanita           | native | shrub                      | -                                | -                           | -                           | -                                |
| <i>Arctostaphylos manzanita</i> ssp. <i>elegans</i>      | Konocti manzanita           | native | shrub                      | Rank 1B.3                        | -                           | -                           | -                                |
| <i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i>    | Common manzanita            | native | shrub                      | -                                | -                           | -                           | -                                |
| <i>Arctostaphylos viscida</i> ssp. <i>pulchella</i>      | White leaf manzanita        | native | tree, shrub                | -                                | -                           | -                           | 5                                |
| <i>Arctostaphylos viscida</i> ssp. <i>viscida</i>        | Smooth white leaf manzanita | native | tree, shrub                | -                                | -                           | -                           | 2.2                              |
| <i>Arnica discoidea</i>                                  | Rayless arnica              | native | perennial herb             | -                                | -                           | -                           | -                                |
| <i>Artemisia douglasiana</i>                             | California mugwort          | native | perennial herb             | -                                | -                           | FAC                         | -                                |
| <i>Asclepias cordifolia</i>                              | Purple milkweed             | native | perennial herb             | -                                | -                           | -                           | -                                |
| <i>Asclepias eriocarpa</i>                               | Indian milkweed             | native | perennial herb             | -                                | -                           | -                           | -                                |
| <i>Asclepias fascicularis</i>                            | Milkweed                    | native | perennial herb             | -                                | -                           | FAC                         | -                                |
| <i>Aspidotis densa</i>                                   | Lace fern                   | native | fern                       | -                                | -                           | -                           | 3.4                              |
| <i>Astragalus breweri</i>                                | Brewer's milk vetch         | native | annual herb                | Rank 4.2                         | -                           | -                           | 3.2                              |
| <i>Astragalus clevelandii</i>                            | Cleveland's milk vetch      | native | perennial herb             | Rank 4.3                         | -                           | FAC                         | 6.1                              |
| <i>Astragalus gambelianus</i>                            | Gambel's dwarf milk vetch   | native | annual herb                | -                                | -                           | -                           | -                                |
| <i>Astragalus rattanii</i> var. <i>jepsonianus</i>       | Jepson's milk vetch         | native | annual herb                | Rank 1B.2                        | -                           | -                           | 4.3                              |

| Scientific Name                                      | Common Name              | Origin                | Form                    | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|------------------------------------------------------|--------------------------|-----------------------|-------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Athyrium filix-femina</i> var. <i>cyclosorum</i>  | Western lady fern        | native                | fern                    | -                                | -                           | FAC                         | -                                |
| <i>Athysanus pusillus</i>                            | Dwarf athysanus          | native                | annual herb             | -                                | -                           | -                           | -                                |
| <i>Avena barbata</i>                                 | Slim oat                 | non-native (invasive) | annual, perennial grass | -                                | Moderate                    | -                           | -                                |
| <i>Avena fatua</i>                                   | Wildoats                 | non-native (invasive) | annual grass            | -                                | Moderate                    | -                           | -                                |
| <i>Baccharis pilularis</i> ssp. <i>consanguinea</i>  | Coyote brush             | native                | shrub                   | -                                | -                           | -                           | -                                |
| <i>Baccharis salicifolia</i> ssp. <i>salicifolia</i> | Mule fat                 | native                | shrub                   | -                                | -                           | FAC                         | -                                |
| <i>Balsamorhiza macrolepis</i>                       | Big scale balsam root    | native                | perennial herb          | Rank 1B.2                        | -                           | -                           | -                                |
| <i>Barbarea vulgaris</i>                             | Yellow rocket            | non-native            | perennial herb          | -                                | -                           | FAC                         | -                                |
| <i>Bellardia trixago</i>                             | Mediterranean linseed    | non-native (invasive) | annual herb             | -                                | Limited                     | -                           | -                                |
| <i>Brickellia californica</i>                        | California brickellia    | native                | perennial herb          | -                                | -                           | FACU                        | -                                |
| <i>Briza maxima</i>                                  | Rattlesnake grass        | non-native (invasive) | annual grass            | -                                | Limited                     | -                           | -                                |
| <i>Briza minor</i>                                   | Little rattlesnake grass | non-native            | annual grass            | -                                | -                           | FAC                         | -                                |
| <i>Brodiaea elegans</i> ssp. <i>elegans</i>          | Harvest brodiaea         | native                | perennial herb          | -                                | -                           | FACU                        | -                                |
| <i>Brodiaea leptandra</i>                            | Narrow-anthered brodiaea | native                | perennial herb          | Rank 1B.2                        | -                           | -                           | -                                |
| <i>Bromus carinatus</i> var. <i>carinatus</i>        | California brome         | native                | perennial grass         | -                                | -                           | -                           | -                                |
| <i>Bromus diandrus</i>                               | Ripgut brome             | non-native (invasive) | annual grass            | -                                | Moderate                    | -                           | -                                |
| <i>Bromus hordeaceus</i>                             | Soft chess               | non-native (invasive) | annual grass            | -                                | Limited                     | FACU                        | -                                |
| <i>Bromus laevipes</i>                               | Narrow flowered brome    | native                | annual, perennial grass | -                                | -                           | -                           | 1.7                              |



| Scientific Name                                         | Common Name                    | Origin                | Form                         | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|--------------------------------|-----------------------|------------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Bromus madritensis</i> ssp. <i>madritensis</i>       | Foxtail chess                  | non-native            | annual grass                 | -                                | -                           | UPL                         | -                                |
| <i>Bromus madritensis</i> ssp. <i>rubens</i>            | Foxtail brome                  | non-native (invasive) | annual grass                 | -                                | High                        | UPL                         | -                                |
| <i>Calandrinia menziesii</i>                            | Red maids                      | native                | annual herb                  | -                                | -                           | FACU                        | -                                |
| <i>Callitriche heterophylla</i> var. <i>bolanderi</i>   | Bolander's water starwort      | native                | annual herb                  | -                                | -                           | OBL                         | -                                |
| <i>Calochortus amabilis</i>                             | Golden fairy lantern           | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Calochortus luteus</i>                               | Yellow mariposa                | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Calochortus splendens</i>                            | Splendid mariposa              | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Calochortus tolmiei</i>                              | Hairy star tulip               | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Calochortus uniflorus</i>                            | Large flowered star tulip      | native                | perennial herb               | Rank 4.2                         | -                           | FACW                        | 1.7                              |
| <i>Calochortus vestae</i>                               | Yellow mariposa                | native                | perennial herb               | -                                | -                           | -                           | 2                                |
| <i>Calycadenia fremontii</i>                            | Fremont's calycadenia          | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Calycadenia pauciflora</i>                           | Small flowered calycadenia     | native                | annual herb                  | -                                | -                           | -                           | 5.3                              |
| <i>Calycanthus occidentalis</i>                         | Spicebush                      | native                | shrub                        | -                                | -                           | FAC                         | -                                |
| <i>Calystegia collina</i> ssp. <i>collina</i>           | Hillside morning glory         | native                | perennial herb               | -                                | -                           | -                           | 4.7                              |
| <i>Calystegia collina</i> ssp. <i>oxyphylla</i>         | Mt. Saint Helena morning glory | native                | perennial herb (rhizomatous) | Rank 4.2                         | -                           | -                           | 5.6                              |
| <i>Calystegia occidentalis</i> ssp. <i>occidentalis</i> | Modoc morning glory            | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Calystegia purpurata</i> ssp. <i>purpurata</i>       | Smooth western morning glory   | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Camissoniopsis intermedia</i>                        | Intermediate sun cups          | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Campanula angustiflora</i>                           | Eastwood's harebell            | native                | annual herb                  | -                                | -                           | -                           | 3.9                              |
| <i>Capsella bursa-pastoris</i>                          | Shepherd's purse               | non-native            | annual herb                  | -                                | -                           | FACU                        | -                                |
| <i>Cardamine hirsuta</i>                                | Hairy bitter cress             | non-native            | annual herb                  | -                                | -                           | FACU                        | -                                |

| Scientific Name                                           | Common Name                | Origin                | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-----------------------------------------------------------|----------------------------|-----------------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Cardamine oligosperma</i>                              | Idaho bittercress          | native                | annual, perennial herb   | -                                | -                           | FAC                         | -                                |
| <i>Carduus pycnocephalus</i> ssp. <i>pycnocephalus</i>    | Italian thistle            | non-native (invasive) | annual herb              | -                                | Moderate                    | -                           | -                                |
| <i>Carex barbarae</i>                                     | Valley sedge               | native                | perennial grasslike herb | -                                | -                           | FAC                         | -                                |
| <i>Carex densa</i>                                        | Dense sedge                | native                | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Carex multicaulis</i>                                  | Forest sedge               | native                | perennial grasslike herb | -                                | -                           | -                           | -                                |
| <i>Carex nudata</i>                                       | Torrent sedge              | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Carex pellita</i>                                      | Woolly sedge               | native                | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Carex praegracilis</i>                                 | Field sedge                | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Carex serratodens</i>                                  | Bifid sedge                | native                | perennial grasslike herb | -                                | -                           | FACW                        | 4.9                              |
| <i>Carex tumulicola</i>                                   | Split awn sedge            | native                | perennial grasslike herb | -                                | -                           | FACU                        | -                                |
| <i>Castilleja affinis</i> ssp. <i>affinis</i>             | Coast Indian paint brush   | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Castilleja applegatei</i> ssp. <i>martinii</i>         | Martin's paintbrush        | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Castilleja attenuata</i>                               | Narrow leaved owl's clover | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Castilleja densiflora</i> ssp. <i>densiflora</i>       | Dense flower owl's clover  | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Castilleja exserta</i> ssp. <i>exserta</i>             | Purple owl's clover        | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Castilleja foliolosa</i>                               | Texas paintbrush           | native                | perennial herb           | -                                | -                           | -                           | 2.3                              |
| <i>Castilleja minor</i>                                   | Little paintbrush          | native                | annual herb              | -                                | -                           | OBL                         | -                                |
| <i>Castilleja rubicundula</i> ssp. <i>lithospermoides</i> | Cream sacs                 | native                | annual herb              | -                                | -                           | -                           | 2.4                              |
| <i>Caulanthus lasiophyllus</i>                            | California mustard         | native                | annual herb              | -                                | -                           | -                           | -                                |



| Scientific Name                                          | Common Name                        | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------|------------------------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Ceanothus cuneatus</i> var. <i>cuneatus</i>           | Buck brush                         | native                | shrub                  | -                                | -                           | -                           | 1.5                              |
| <i>Ceanothus foliosus</i> var. <i>foliosus</i>           | Wavy leaved ceanothus              | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Ceanothus integerrimus</i> var. <i>macrothyrsus</i>   | Deerbrush                          | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Ceanothus jepsonii</i>                                | Musk brush                         | native                | shrub                  | -                                | -                           | -                           | 6                                |
| <i>Centaurea calcitrapa</i>                              | Purple star thistle                | non-native (invasive) | annual, perennial herb | -                                | Moderate                    | -                           | -                                |
| <i>Centaurea melitensis</i>                              | Tocalote                           | non-native (invasive) | annual herb            | -                                | Moderate                    | -                           | -                                |
| <i>Centaurea solstitialis</i>                            | Yellow starthistle                 | non-native (invasive) | annual herb            | -                                | High                        | -                           | -                                |
| <i>Centromadia fitchii</i>                               | Spikeweed                          | native                | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Cephalanthus occidentalis</i>                         | Common buttonbush                  | native                | shrub                  | -                                | -                           | OBL                         | -                                |
| <i>Cerastium glomeratum</i>                              | Large mouse ears                   | non-native            | annual herb            | -                                | -                           | UPL                         | -                                |
| <i>Cercis occidentalis</i>                               | Western redbud                     | native                | tree, shrub            | -                                | -                           | -                           | -                                |
| <i>Cercocarpus betuloides</i> var. <i>betuloides</i>     | Birch leaf mountain mahogany       | native                | tree, shrub            | -                                | -                           | -                           | -                                |
| <i>Chaenactis glabriuscula</i> var. <i>heterocarpha</i>  | Variable fruited yellow chaenactis | native                | annual herb            | -                                | -                           | -                           | 2.5                              |
| <i>Chenopodium album</i>                                 | Lambs quarters                     | non-native            | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i> | Common soaproot                    | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Chorizanthe membranacea</i>                           | Pink spineflower                   | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Chorizanthe polygonoides</i> var. <i>polygonoides</i> | Knotweed spineflower               | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Cichorium intybus</i>                                 | Chicory                            | non-native            | perennial herb         | -                                | -                           | FACU                        | -                                |
| <i>Cirsium cymosum</i> var. <i>cymosum</i>               | Peregrine thistle                  | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Cirsium douglasii</i>                                 | Swamp thistle                      | native                | perennial herb         | -                                | -                           | OBL                         | -                                |

| Scientific Name                                        | Common Name             | Origin                | Form                 | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|--------------------------------------------------------|-------------------------|-----------------------|----------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Cirsium occidentale</i> var. <i>venustum</i>        | Coulter's thistle       | native                | perennial herb       | -                                | -                           | -                           | -                                |
| <i>Cirsium vulgare</i>                                 | Bullthistle             | non-native (invasive) | perennial herb       | -                                | Moderate                    | FACU                        | -                                |
| <i>Clarkia amoena</i> ssp. <i>huntiana</i>             | Farewell to spring      | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Clarkia concinna</i> ssp. <i>concinna</i>           | Red ribbons             | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Clarkia gracilis</i> ssp. <i>tracyi</i>             | Tracy's clarkia         | native                | annual herb          | Rank 4.2                         | -                           | -                           | 5                                |
| <i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>      | Purple clarkia          | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Clarkia rhomboidea</i>                              | Tongue clarkia          | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Clarkia unguiculata</i>                             | Woodland clarkia        | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Claytonia exigua</i> ssp. <i>exigua</i>             | Serpentine springbeauty | native                | annual herb          | -                                | -                           | -                           | 3.4                              |
| <i>Claytonia parviflora</i> ssp. <i>parviflora</i>     | Miner's lettuce         | native                | annual herb          | -                                | -                           | FACU                        | -                                |
| <i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>     | Miner's lettuce         | native                | annual herb          | -                                | -                           | FAC                         | -                                |
| <i>Clematis lasiantha</i>                              | Pipestem                | native                | perennial herb, vine | -                                | -                           | -                           | -                                |
| <i>Clematis ligusticifolia</i>                         | Creek clematis          | native                | perennial herb, vine | -                                | -                           | FAC                         | -                                |
| <i>Collinsia greenei</i>                               | Greene's collinsia      | native                | annual herb          | -                                | -                           | -                           | 5.2                              |
| <i>Collinsia heterophylla</i> var. <i>heterophylla</i> | Purple chinese houses   | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Collinsia sparsiflora</i> var. <i>sparsiflora</i>   | Few flowered collinsia  | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Collomia diversifolia</i>                           | Serpentine collomia     | native                | annual herb          | Rank 4.3                         | -                           | -                           | 5.6                              |
| <i>Collomia heterophylla</i>                           | Varied leaved collomia  | native                | annual herb          | -                                | -                           | -                           | -                                |
| <i>Convolvulus arvensis</i>                            | Field bindweed          | non-native            | perennial herb, vine | -                                | -                           | -                           | -                                |



| Scientific Name                                 | Common Name              | Origin                | Form                          | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------------------------|--------------------------|-----------------------|-------------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Cordylanthus pilosus</i> ssp. <i>pilosus</i> | Hairy bird's beak        | native                | annual herb                   | -                                | -                           | -                           | -                                |
| <i>Cordylanthus tenuis</i> ssp. <i>brunneus</i> | Serpentine bird's beak   | native                | annual herb (hemiparasitic)   | Rank 4.3                         | -                           | -                           | 5.1                              |
| <i>Cornus nuttallii</i>                         | Mountain dogwood         | native                | shrub                         | -                                | -                           | FACU                        | -                                |
| <i>Cornus sericea</i> ssp. <i>occidentalis</i>  | Western dogwood          | native                | shrub                         | -                                | -                           | FACW                        | -                                |
| <i>Crassula aquatica</i>                        | Aquatic pygmy weed       | native                | annual herb                   | -                                | -                           | OBL                         | -                                |
| <i>Crassula connata</i>                         | Sand pygmy weed          | native                | annual herb                   | -                                | -                           | FAC                         | -                                |
| <i>Crassula tillaea</i>                         | Mediterranean pygmy weed | non-native            | annual herb                   | -                                | -                           | FACU                        | -                                |
| <i>Crocanthemum scoparium</i>                   | Peak rush-rose           | native                | shrub                         | -                                | -                           | -                           | -                                |
| <i>Croton setiger</i>                           | Turkey-mullein           | native                | perennial herb                | -                                | -                           | -                           | -                                |
| <i>Crypsis</i> sp.                              | Prickle grass            | non-native            | annual grass                  | -                                | -                           | FACW-OBL-                   | -                                |
| <i>Cryptantha flaccida</i>                      | Beaked cryptantha        | native                | annual herb                   | -                                | -                           | -                           | 1.6                              |
| <i>Cryptantha hispidula</i>                     | Napa cryptantha          | native                | annual herb                   | -                                | -                           | -                           | 6                                |
| <i>Cuscuta brachycalyx</i>                      | San joaquin dodder       | native                | annual herb, vine (parasitic) | -                                | -                           | -                           | -                                |
| <i>Cynodon dactylon</i>                         | Bermuda grass            | non-native (invasive) | perennial grass               | -                                | Moderate                    | FACU                        | -                                |
| <i>Cynoglossum grande</i>                       | Houndstongue             | native                | perennial herb                | -                                | -                           | -                           | -                                |
| <i>Cynosurus echinatus</i>                      | Dogtail grass            | non-native (invasive) | annual grass                  | -                                | Moderate                    | -                           | -                                |
| <i>Cyperus eragrostis</i>                       | Tall cyperus             | native                | perennial grasslike herb      | -                                | -                           | FACW                        | -                                |
| <i>Cytisus scoparius</i>                        | Scotch broom             | non-native (invasive) | shrub                         | -                                | High                        | -                           | -                                |
| <i>Dactylis glomerata</i>                       | Orchardgrass             | non-native (invasive) | perennial grass               | -                                | Limited                     | FACU                        | -                                |

| Scientific Name                                      | Common Name              | Origin     | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|------------------------------------------------------|--------------------------|------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Damasonium californicum</i>                       | California damsonium     | native     | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Danthonia californica</i>                         | California oatgrass      | native     | perennial grass          | -                                | -                           | FAC                         | -                                |
| <i>Datisca glomerata</i>                             | Durango root             | native     | perennial herb           | -                                | -                           | FACW                        | -                                |
| <i>Datura stramonium</i>                             | Jimson weed              | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Daucus pusillus</i>                               | Wild carrot              | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Delphinium hesperium</i> ssp. <i>pallescens</i>   | Western larkspur         | native     | perennial herb           | -                                | -                           | FAC                         | -                                |
| <i>Delphinium nudicaule</i>                          | Canyon larkspur          | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Delphinium uliginosum</i>                         | Swamp larkspur           | native     | perennial herb           | Rank 4.2                         | -                           | OBL                         | 5.7                              |
| <i>Delphinium variegatum</i> ssp. <i>variegatum</i>  | Royal larkspur           | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Dendromecon rigida</i>                            | Bush poppy               | native     | shrub                    | -                                | -                           | -                           | -                                |
| <i>Deschampsia cespitosa</i> ssp. <i>cespitosa</i>   | Tufted hairgrass         | native     | perennial grass          | -                                | -                           | FACW                        | -                                |
| <i>Deschampsia danthonioides</i>                     | Annual hairgrass         | native     | annual grass             | -                                | -                           | FACW                        | -                                |
| <i>Dichelostemma capitatum</i> ssp. <i>capitatum</i> | Wild hyacinth            | native     | perennial herb           | -                                | -                           | FACU                        | -                                |
| <i>Dichelostemma congestum</i>                       | Fork toothed ookow       | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Digitaria sanguinalis</i>                         | Crabgrass                | non-native | annual grass             | -                                | -                           | FACU                        | -                                |
| <i>Diplacus aurantiacus</i>                          | Sticky monkeyflower      | native     | shrub                    | -                                | -                           | FACU                        | -                                |
| <i>Diplacus congdonii</i>                            | Congdon's monkeyflower   | native     | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Diplacus douglasii</i>                            | Purple mouse ears        | native     | annual herb              | -                                | -                           | FACW                        | 2.7                              |
| <i>Diplacus kelloggii</i>                            | Kellogg's monkeyflower   | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Diplacus tricolor</i>                             | Tricolor monkeyflower    | native     | annual herb              | -                                | -                           | OBL                         | -                                |
| <i>Downingia concolor</i> var. <i>concolor</i>       | Spotted throat downingia | native     | annual herb              | -                                | -                           | OBL                         | -                                |



| Scientific Name                               | Common Name            | Origin                | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-----------------------------------------------|------------------------|-----------------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Downingia cuspidata</i>                    | Toothed downingia      | native                | annual herb              | -                                | -                           | OBL                         | -                                |
| <i>Drymocallis glandulosa</i>                 | Sticky cinquefoil      | native                | perennial herb           | -                                | -                           | FAC                         | -                                |
| <i>Dryopteris arguta</i>                      | Wood fern              | native                | fern                     | -                                | -                           | -                           | -                                |
| <i>Dudleya cymosa</i> ssp. <i>cymosa</i>      | Canyon dudleya         | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Echinochloa crus-galli</i>                 | Barnyard grass         | non-native            | annual grass             | -                                | -                           | FACW                        | -                                |
| <i>Ehrendorferia chrysantha</i>               | Golden eardrops        | native                | perennial herb           | -                                | -                           | -                           | 1.1                              |
| <i>Eleocharis acicularis</i>                  | Needle spikerush       | native                | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Eleocharis macrostachya</i>                | Spike rush             | native                | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Elymus caput-medusae</i>                   | Medusa head            | non-native (invasive) | annual grass             | -                                | High                        | -                           | -                                |
| <i>Elymus elymoides</i> var. <i>elymoides</i> | Squirrel tail grass    | native                | perennial grass          | -                                | -                           | FACU                        | -                                |
| <i>Elymus glaucus</i> ssp. <i>glaucus</i>     | Blue wild rye          | native                | perennial grass          | -                                | -                           | FACU                        | -                                |
| <i>Elymus multisetus</i>                      | Big squirreltail grass | native                | perennial grass          | -                                | -                           | -                           | -                                |
| <i>Elymus triticoides</i>                     | Beardless wild rye     | native                | perennial grass          | -                                | -                           | FAC                         | -                                |
| <i>Epilobium brachycarpum</i>                 | Willow herb            | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Epilobium campestre</i>                    | Smooth boisduvalia     | native                | annual herb              | -                                | -                           | OBL                         | -                                |
| <i>Epilobium canum</i> ssp. <i>canum</i>      | California fuchsia     | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Epilobium ciliatum</i>                     | Slender willow herb    | native                | perennial herb           | -                                | -                           | FACW                        | -                                |
| <i>Epilobium densiflorum</i>                  | Willow herb            | native                | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Epilobium minutum</i>                      | Minute willowherb      | native                | annual herb              | -                                | -                           | FACU                        | 2                                |
| <i>Epilobium torreyi</i>                      | Narrow boisduvalia     | native                | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Epipactis gigantea</i>                     | Stream orchid          | native                | perennial herb           | -                                | -                           | OBL                         | -                                |

| Scientific Name                                           | Common Name                    | Origin                | Form                         | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-----------------------------------------------------------|--------------------------------|-----------------------|------------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Equisetum hyemale</i> ssp. <i>affine</i>               | Giant scouring rush            | native                | fern                         | -                                | -                           | FACW                        | -                                |
| <i>Equisetum laevigatum</i>                               | Smooth scouring rush           | native                | fern                         | -                                | -                           | FACW                        | -                                |
| <i>Ericameria arborescens</i>                             | Golden fleece                  | native                | shrub                        | -                                | -                           | -                           | 1.3                              |
| <i>Erigeron canadensis</i>                                | Canada horseweed               | native                | annual herb                  | -                                | -                           | FACU                        | -                                |
| <i>Erigeron greenei</i>                                   | Greene's narrow-leaved daisy   | native                | perennial herb               | Rank 1B.2                        | -                           | -                           | -                                |
| <i>Erigeron philadelphicus</i> var. <i>philadelphicus</i> | Philadelphia fleabane          | native                | perennial herb               | -                                | -                           | FACU                        | -                                |
| <i>Eriodictyon californicum</i>                           | Yerba santa                    | native                | shrub                        | -                                | -                           | -                           | -                                |
| <i>Eriogonum luteolum</i> var. <i>luteolum</i>            | Golden buckwheat               | native                | annual herb                  | -                                | -                           | -                           | 3.8                              |
| <i>Eriogonum nudum</i> var. <i>nudum</i>                  | Nude buckwheat                 | native                | shrub                        | -                                | -                           | -                           | -                                |
| <i>Eriophyllum lanatum</i> var. <i>achilleoides</i>       | Yarrow leaved woolly sunflower | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Erodium botrys</i>                                     | Big heron bill                 | non-native            | annual herb                  | -                                | -                           | FACU                        | -                                |
| <i>Erodium brachycarpum</i>                               | White stemmed filaree          | non-native            | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Erodium cicutarium</i>                                 | Red stemmed filaree            | non-native (invasive) | annual herb                  | -                                | Limited                     | -                           | -                                |
| <i>Erodium moschatum</i>                                  | Whitestem filaree              | non-native            | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Eryngium aristulatum</i> var. <i>aristulatum</i>       | Jepson's button celery         | native                | perennial herb               | -                                | -                           | OBL                         | -                                |
| <i>Erythranthe guttata</i>                                | Seep monkeyflower              | native                | perennial herb (rhizomatous) | -                                | -                           | OBL                         | -                                |
| <i>Erythranthe latidens</i>                               | Broad toothed monkeyflower     | native                | annual herb                  | -                                | -                           | OBL                         | -                                |
| <i>Erythranthe microphylla</i>                            | Seep monkeyflower              | native                | annual herb                  | -                                | -                           | OBL                         | -                                |
| <i>Erythranthe nudata</i>                                 | Bare monkeyflower              | native                | annual herb                  | Rank 4.3                         | -                           | OBL                         | 5.6                              |
| <i>Erythronium helenae</i>                                | St. Helena fawn lily           | native                | perennial herb (bulb)        | Rank 4.2                         | -                           | -                           | 4.5                              |
| <i>Eschscholzia caespitosa</i>                            | Tufted poppy                   | native                | annual herb                  | -                                | -                           | -                           | -                                |



| Scientific Name                                    | Common Name              | Origin                | Form                    | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------|--------------------------|-----------------------|-------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Eschscholzia californica</i>                    | California poppy         | native                | annual, perennial herb  | -                                | -                           | -                           | -                                |
| <i>Eucalyptus camaldulensis</i>                    | Red gum                  | non-native (invasive) | tree                    | -                                | Limited                     | FAC                         | -                                |
| <i>Euphorbia serpyllifolia</i>                     | Thyme-leaved spurge      | native                | annual herb             | -                                | -                           | -                           | -                                |
| <i>Euphorbia spathulata</i>                        | Reticulate seeded spurge | native                | annual herb             | -                                | -                           | FAC                         | -                                |
| <i>Eurybia radulina</i>                            | Roughleaf aster          | native                | perennial herb          |                                  |                             |                             |                                  |
| <i>Euthamia occidentalis</i>                       | Western goldenrod        | native                | perennial herb          | -                                | -                           | FACW                        | -                                |
| <i>Festuca arundinacea</i>                         | Reed fescue              | non-native (invasive) | perennial grass         | -                                | Moderate                    | FACU                        | -                                |
| <i>Festuca bromoides</i>                           | Brome fescue             | non-native            | annual grass            | -                                | -                           | FACU                        | -                                |
| <i>Festuca californica</i>                         | California fescue        | native                | perennial grass         | -                                | -                           | FACU                        | 2.4                              |
| <i>Festuca idahoensis</i>                          | Blue fescue              | native                | perennial grass         | -                                | -                           | FACU                        | 1.3                              |
| <i>Festuca microstachys</i>                        | Small fescue             | native                | annual grass            | -                                | -                           | -                           | -                                |
| <i>Festuca myuros</i>                              | Rattail sixweeks grass   | non-native (invasive) | annual grass            | -                                | Moderate                    | FACU                        | -                                |
| <i>Festuca perennis</i>                            | Italian rye grass        | non-native (invasive) | annual, perennial grass | -                                | Moderate                    | FAC                         | -                                |
| <i>Ficus carica</i>                                | Common fig               | non-native (invasive) | tree                    | -                                | Moderate                    | FACU                        | -                                |
| <i>Frangula californica</i> ssp. <i>tomentella</i> | Hoary coffeeberry        | native                | shrub                   | -                                | -                           | -                           | 1.5                              |
| <i>Fraxinus dipetala</i>                           | Two petaled ash          | native                | tree, shrub             | -                                | -                           | -                           | -                                |
| <i>Fraxinus latifolia</i>                          | Oregon ash               | native                | tree                    | -                                | -                           | FACW                        | -                                |
| <i>Fritillaria affinis</i>                         | Checker lily             | native                | perennial herb (bulb)   | -                                | -                           | -                           | 2                                |
| <i>Fritillaria purdyi</i>                          | Purdy's fritillary       | native                | perennial herb (bulb)   | Rank 4.3                         | -                           | -                           | 4.5                              |

| Scientific Name                               | Common Name           | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-----------------------------------------------|-----------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Fritillaria recurva</i>                    | Scarlet fritillary    | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Galium andrewsii</i> ssp. <i>andrewsii</i> | Phlox leaved bedstraw | native                | perennial herb         | -                                | -                           | -                           | 3.2                              |
| <i>Galium aparine</i>                         | Cleavers              | native                | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Galium bolanderi</i>                       | Bolander's bedstraw   | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Galium californicum</i>                    | California bedstraw   | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Galium murale</i>                          | Tiny bedstraw         | non-native            | annual herb            | -                                | -                           | -                           | -                                |
| <i>Galium parisiense</i>                      | Wall bedstraw         | non-native            | annual herb            | -                                | -                           | UPL                         | -                                |
| <i>Galium porrigens</i> var. <i>porrigens</i> | Graceful bedstraw     | native                | vine, shrub            | -                                | -                           | -                           | -                                |
| <i>Galium porrigens</i> var. <i>tenu</i>      | Graceful bedstraw     | native                | vine, shrub            | -                                | -                           | -                           | -                                |
| <i>Garrya congdonii</i>                       | Silk tassel           | native                | shrub                  | -                                | -                           | -                           | 5                                |
| <i>Gastridium phleoides</i>                   | Nit grass             | non-native            | annual grass           | -                                | -                           | FACU                        | -                                |
| <i>Genista monspessulana</i>                  | French broom          | non-native (invasive) | shrub                  | -                                | High                        | -                           | -                                |
| <i>Geranium dissectum</i>                     | Wild geranium         | non-native (invasive) | annual herb            | -                                | Limited                     | -                           | -                                |
| <i>Geranium molle</i>                         | Crane's bill geranium | non-native            | annual, perennial herb | -                                | -                           | -                           | -                                |
| <i>Gilia capitata</i> ssp. <i>capitata</i>    | Blue field gilia      | native                | annual herb            | -                                | -                           | -                           | 1.6                              |
| <i>Gilia clivorum</i>                         | Purple spot gilia     | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Gilia tricolor</i> ssp. <i>diffusa</i>     | Bird's eyes           | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Githopsis specularioides</i>               | Venus' looking glass  | native                | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Glyceria declinata</i>                     | Waxy mannagrass       | non-native (invasive) | perennial grass        | -                                | Moderate                    | FACW                        | -                                |
| <i>Glycyrrhiza glabra</i>                     | Licorice              | non-native            | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Glycyrrhiza lepidota</i>                   | American licorice     | native                | perennial herb         | -                                | -                           | FAC                         | -                                |
| <i>Gnaphalium palustre</i>                    | Lowland cudweed       | native                | annual herb            | -                                | -                           | FACW                        | -                                |



| Scientific Name                                         | Common Name                 | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|-----------------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Gratiola ebracteata</i>                              | Common hedge hyssop         | native                | annual herb            | -                                | -                           | OBL                         | -                                |
| <i>Grindelia hirsutula</i>                              | Gumweed                     | native                | perennial herb         | -                                | -                           | FACW                        | 1.4                              |
| <i>Helenium bigelovii</i>                               | Bigelow's sneezeweed        | native                | perennial herb         | -                                | -                           | FACW                        | 2.9                              |
| <i>Helenium puberulum</i>                               | Sneezeweed                  | native                | perennial herb         | -                                | -                           | FACW                        | -                                |
| <i>Helianthella californica</i> var. <i>californica</i> | California helianthella     | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Helianthus exilis</i>                                | Serpentine sunflower        | native                | annual herb            | Rank 4.2                         | -                           | FACU                        | 5.7                              |
| <i>Heliotropium curassavicum</i> var. <i>oculatum</i>   | Seaside heliotrope          | native                | perennial herb         | -                                | -                           | FACU                        | -                                |
| <i>Helminthotheca echioides</i>                         | Bristly ox-tongue           | non-native (invasive) | annual, perennial herb | -                                | Limited                     | FAC                         | -                                |
| <i>Hemizonia congesta</i> ssp. <i>clevelandii</i>       | Cleveland's tarweed         | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Hesperervax sparsiflora</i> var. <i>sparsiflora</i>  | Few flowered evax           | native                | annual herb            | -                                | -                           | FACU                        | 1.8                              |
| <i>Hesperocyparis sargentii</i>                         | Sargent cypress             | native                | tree, shrub            | -                                | -                           | -                           | 4.9                              |
| <i>Hesperolinon bicarpellatum</i>                       | Two carpellate western flax | native                | annual herb            | Rank 1B.2                        | -                           | -                           | 6.2                              |
| <i>Hesperolinon californicum</i>                        | California western flax     | native                | annual herb            | -                                | -                           | -                           | 2.8                              |
| <i>Hesperolinon didymocarpum</i>                        | Lake County western flax    | native                | annual herb            | SE, Rank 1B.2                    | -                           | -                           | 6.2                              |
| <i>Hesperolinon disjunctum</i>                          | Coast range western flax    | native                | annual herb            | -                                | -                           | -                           | 6                                |
| <i>Hesperolinon micranthum</i>                          | Small flower western flax   | native                | annual herb            | -                                | -                           | -                           | 2.4                              |
| <i>Hesperolinon spergulinum</i>                         | Slender western flax        | native                | annual herb            | -                                | -                           | -                           | 4.7                              |
| <i>Heterocodon rariflorum</i>                           | Heterocodon                 | native                | annual herb            | -                                | -                           | FACW                        | -                                |
| <i>Heteromeles arbutifolia</i>                          | Toyon                       | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Heterotheca oregona</i>                              | Oregon golden aster         | native                | perennial herb         | -                                | -                           | FACU                        | -                                |
| <i>Hirschfeldia incana</i>                              | Short-podded mustard        | non-native (invasive) | perennial herb         | -                                | Moderate                    | -                           | -                                |

| Scientific Name                                          | Common Name                      | Origin                | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------|----------------------------------|-----------------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Hoita macrostachya</i>                                | California hemp                  | native                | perennial herb           | -                                | -                           | OBL                         | -                                |
| <i>Holocarpha virgata</i> ssp. <i>virgata</i>            | Narrow tarplant                  | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Hordeum brachyantherum</i> ssp. <i>brachyantherum</i> | Meadow barley                    | native                | perennial grass          | -                                | -                           | FACW                        | -                                |
| <i>Hordeum brachyantherum</i> ssp. <i>californicum</i>   | Meadow barley                    | native                | perennial grass          | -                                | -                           | FACW                        | 3.1                              |
| <i>Hordeum marinum</i> ssp. <i>gussoneanum</i>           | Mediterranean barley             | non-native (invasive) | annual grass             | -                                | Moderate                    | FAC                         | -                                |
| <i>Hordeum murinum</i> ssp. <i>glaucum</i>               | Foxtail                          | non-native (invasive) | annual grass             | -                                | Moderate                    | FACU                        | -                                |
| <i>Hordeum murinum</i> ssp. <i>leporinum</i>             | Farmer's foxtail                 | non-native (invasive) | annual grass             | -                                | Moderate                    | FACU                        | -                                |
| <i>Hypericum concinnum</i>                               | Gold wire                        | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Hypericum perforatum</i> ssp. <i>perforatum</i>       | Klamathweed                      | non-native            | perennial herb           | -                                | Moderate                    | FACU                        | -                                |
| <i>Hypochaeris glabra</i>                                | Smooth cats ear                  | non-native (invasive) | annual herb              | -                                | Limited                     | -                           | -                                |
| <i>Hypochaeris radicata</i>                              | Hairy cats ear                   | non-native (invasive) | perennial herb           | -                                | Moderate                    | FACU                        | -                                |
| <i>Iris fernaldii</i>                                    | Fernald's iris                   | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Iris macrosiphon</i>                                  | Ground iris                      | native                | perennial herb           | -                                | -                           | -                           | 1.1                              |
| <i>Juglans hindsii</i>                                   | Northern California black walnut | native                | tree                     | Rank 1B.1                        | -                           | FAC                         | -                                |
| <i>Juncus balticus</i> ssp. <i>ater</i>                  | Baltic rush                      | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus bufonius</i>                                   | Common toad rush                 | native                | annual grasslike herb    | -                                | -                           | FACW                        | -                                |
| <i>Juncus effusus</i> ssp. <i>pacificus</i>              | Pacific rush                     | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus mexicanus</i>                                  | Mexican rush                     | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus occidentalis</i>                               | Western rush                     | native                | perennial grasslike herb | -                                | -                           | FACW                        | -                                |



| Scientific Name                                       | Common Name               | Origin     | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------------------------------|---------------------------|------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Juncus patens</i>                                  | Common rush               | native     | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus phaeocephalus</i> var. <i>phaeocephalus</i> | Brown headed rush         | native     | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus tenuis</i>                                  | Slender rush              | native     | perennial grasslike herb | -                                | -                           | FACW                        | -                                |
| <i>Juncus xiphioides</i>                              | Iris leaved rush          | native     | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Keckiella breviflora</i> var. <i>glabrisepala</i>  | Hairless gaping keckiella | native     | shrub                    | -                                | -                           | -                           | -                                |
| <i>Kickxia elatine</i>                                | Sharp point fluellin      | non-native | perennial herb           | -                                | -                           | UPL                         | -                                |
| <i>Koeleria macrantha</i>                             | June grass                | native     | perennial grass          | -                                | -                           | -                           | -                                |
| <i>Lactuca saligna</i>                                | Willow lettuce            | non-native | annual herb              | -                                | -                           | UPL                         | -                                |
| <i>Lactuca serriola</i>                               | Prickly lettuce           | non-native | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Lagophylla minor</i>                               | Little hareleaf           | native     | annual herb              | -                                | -                           | -                           | 4.7                              |
| <i>Lagophylla ramosissima</i>                         | Common hareleaf           | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Lamium amplexicaule</i>                            | Henbit                    | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Lasthenia californica</i> ssp. <i>californica</i>  | California goldfields     | native     | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Lasthenia glaberrima</i>                           | Smooth goldfields         | native     | annual herb              | -                                | -                           | OBL                         | -                                |
| <i>Lasthenia glabrata</i> ssp. <i>glabrata</i>        | Yellow rayed goldfields   | native     | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Lasthenia gracilis</i>                             | Needle goldfields         | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Lathyrus cicera</i>                                | Red peavine               | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Lathyrus hirsutus</i>                              | Caley pea                 | non-native | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Lathyrus tingitanus</i>                            | Tangier pea               | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Lathyrus vestitus</i> var. <i>vestitus</i>         | Hillside pea              | native     | perennial herb           | -                                | -                           | -                           | 1.8                              |
| <i>Layia chrysanthemoides</i>                         | Smooth tidy tips          | native     | annual herb              | -                                | -                           | FACW                        | -                                |

| Scientific Name                                     | Common Name             | Origin                | Form           | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-----------------------------------------------------|-------------------------|-----------------------|----------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Layia septentrionalis</i>                        | Colusa layia            | native                | annual herb    | Rank 1B.2                        | -                           | -                           | 3.2                              |
| <i>Leontodon saxatilis</i> ssp. <i>longirostris</i> | Hawkbit                 | non-native            | annual herb    | -                                | -                           | FACU                        | -                                |
| <i>Lepechinia calycina</i>                          | Pitcher sage            | native                | shrub          | -                                | -                           | -                           | -                                |
| <i>Lepidium latifolium</i>                          | Perennial pepperweed    | non-native (invasive) | perennial herb | -                                | High                        | FAC                         | -                                |
| <i>Lepidium nitidum</i>                             | Shining pepper grass    | native                | annual herb    | -                                | -                           | FAC                         | -                                |
| <i>Lepidium strictum</i>                            | Peppergrass             | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Leptosiphon bicolor</i>                          | True babystars          | native                | annual herb    | -                                | -                           | UPL                         | -                                |
| <i>Leptosiphon ciliatus</i>                         | Whiskerbrush            | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Leptosiphon parviflorus</i>                      | Variable linanthus      | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Lessingia ramulosa</i>                           | Sonoma lessingia        | native                | annual herb    | -                                | -                           | -                           | 5.4                              |
| <i>Lewisia rediviva</i> var. <i>rediviva</i>        | Bitter root             | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Limnanthes douglasii</i> ssp. <i>nivea</i>       | Douglas' meadowfoam     | native                | annual herb    | -                                | -                           | OBL                         | -                                |
| <i>Linanthus dichotomus</i> ssp. <i>meridianus</i>  | Evening snow            | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Lithophragma affine</i>                          | Common woodland star    | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Lithophragma heterophyllum</i>                   | Woodland star           | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Logfia filaginoides</i>                          | California cottonrose   | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Logfia gallica</i>                               | Narrowleaf cottonrose   | non-native            | annual herb    | -                                | -                           | -                           | -                                |
| <i>Lomatium californicum</i>                        | Celery weed             | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Lomatium dasycarpum</i> ssp. <i>tomentosum</i>   | Woolly fruited lomatium | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Lomatium hooveri</i>                             | Hoover's lomatium       | native                | perennial herb | Rank 4.3                         | -                           | -                           | 5.9                              |
| <i>Lomatium marginatum</i> var. <i>marginatum</i>   | Hartweg's lomatium      | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Lomatium marginatum</i> var. <i>purpureum</i>    | Jepson's lomatium       | native                | perennial herb | -                                | -                           | -                           | -                                |



| Scientific Name                                    | Common Name                     | Origin                   | Form                        | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------|---------------------------------|--------------------------|-----------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Lomatium utriculatum</i>                        | Hog fennel                      | native                   | perennial herb              | -                                | -                           | -                           | 1.7                              |
| <i>Lonicera hispidula</i>                          | Pink honeysuckle                | native                   | vine, shrub                 | -                                | -                           | FACU                        | -                                |
| <i>Lonicera interrupta</i>                         | Chaparral honeysuckle           | native                   | vine, shrub                 | -                                | -                           | -                           | -                                |
| <i>Lotus corniculatus</i>                          | Bird's foot trefoil             | non-native               | perennial herb              | -                                | -                           | FAC                         | -                                |
| <i>Lotus tenuis</i>                                | Narrow-leaf bird's foot trefoil | non-native               | perennial herb              | -                                | -                           | FACU                        | -                                |
| <i>Lupinus albifrons</i> var. <i>albifrons</i>     | Silver bush lupine              | native                   | shrub                       | -                                | -                           | -                           | -                                |
| <i>Lupinus albifrons</i> var. <i>collinus</i>      | Silver bush lupine              | native                   | shrub                       | -                                | -                           | -                           | -                                |
| <i>Lupinus bicolor</i>                             | Miniature lupine                | native                   | annual,<br>perennial herb   | -                                | -                           | -                           | -                                |
| <i>Lupinus latifolius</i> var. <i>latifolius</i>   | Broad leaf lupine               | native                   | perennial herb              | -                                | -                           | FACW                        | -                                |
| <i>Lupinus microcarpus</i> var. <i>densiflorus</i> | Dense-flowered chick lupine     | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Lupinus microcarpus</i> var. <i>microcarpus</i> | Chick lupine                    | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Lupinus nanus</i>                               | Sky lupine                      | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Lupinus succulentus</i>                         | Arroyo lupine                   | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Luzula comosa</i> var. <i>comosa</i>            | Hairy wood rush                 | native                   | perennial<br>grasslike herb | -                                | -                           | FAC                         | -                                |
| <i>Lysimachia arvensis</i>                         | Scarlet pimpernel               | non-native               | annual herb                 | -                                | -                           | FAC                         | -                                |
| <i>Lysimachia latifolia</i>                        | Pacific starflower              | native                   | perennial herb              | -                                | -                           | FAC                         | -                                |
| <i>Lythrum hyssopifolia</i>                        | Hyssop loosestrife              | non-native<br>(invasive) | annual,<br>perennial herb   | -                                | Limited                     | OBL                         | -                                |
| <i>Madia elegans</i>                               | Common madia                    | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Madia exigua</i>                                | Small tarweed                   | native                   | annual herb                 | -                                | -                           | -                           | 1.8                              |
| <i>Madia gracilis</i>                              | Gumweed                         | native                   | annual herb                 | -                                | -                           | -                           | -                                |
| <i>Malacothrix floccifera</i>                      | Woolly malacothrix              | native                   | annual herb                 | -                                | -                           | -                           | 2.1                              |
| <i>Malva nicaeensis</i>                            | Bull mallow                     | non-native               | annual herb                 | -                                | -                           | -                           | -                                |

| Scientific Name                                       | Common Name               | Origin                | Form                  | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------------------------------|---------------------------|-----------------------|-----------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Malva parviflora</i>                               | Cheeseweed                | non-native            | annual herb           | -                                | -                           | -                           | -                                |
| <i>Malvella leprosa</i>                               | Alkali mallow             | native                | perennial herb        | -                                | -                           | FACU                        | -                                |
| <i>Marah watsonii</i>                                 | Watson's wild cucumber    | native                | perennial herb, vine  | -                                | -                           | -                           | -                                |
| <i>Marrubium vulgare</i>                              | White horehound           | non-native (invasive) | perennial herb        | -                                | Limited                     | FACU                        | -                                |
| <i>Marsilea vestita</i> ssp. <i>vestita</i>           | Hairy pepperwort          | native                | fern                  | -                                | -                           | OBL                         | -                                |
| <i>Matricaria discoidea</i>                           | Pineapple weed            | native                | annual herb           | -                                | -                           | FACU                        | -                                |
| <i>Medicago polymorpha</i>                            | California burclover      | non-native (invasive) | annual herb           | -                                | Limited                     | FACU                        | -                                |
| <i>Melica californica</i>                             | California melic          | native                | perennial grass       | -                                | -                           | -                           | -                                |
| <i>Melica torreyana</i>                               | Torrey's melica           | native                | perennial grass       | -                                | -                           | -                           | -                                |
| <i>Melilotus albus</i>                                | White sweetclover         | non-native            | annual, biennial herb | -                                | -                           | -                           | -                                |
| <i>Melilotus indicus</i>                              | Annual yellow sweetclover | non-native            | annual herb           | -                                | -                           | FACU                        | -                                |
| <i>Mentha pulegium</i>                                | Pennyroyal                | non-native (invasive) | perennial herb        | -                                | Moderate                    | OBL                         | -                                |
| <i>Micranthes integrifolia</i>                        | Smooth leaf saxifrage     | native                | perennial herb        | -                                | -                           | FACW                        | -                                |
| <i>Micropus californicus</i> var. <i>californicus</i> | Slender cottonweed        | native                | annual herb           | -                                | -                           | FACU                        | -                                |
| <i>Microseris douglasii</i> ssp. <i>douglasii</i>     | Douglas' microseris       | native                | annual herb           | -                                | -                           | FACU                        | -                                |
| <i>Microseris elegans</i>                             | Elegant silverpuffs       | native                | annual herb           | -                                | -                           | -                           | -                                |
| <i>Mimetanthe pilosa</i>                              | Snouted monkey flower     | native                | annual herb           | -                                | -                           | FACW                        | -                                |
| <i>Minuartia californica</i>                          | Sandwort                  | native                | annual herb           | -                                | -                           | FACU                        | 1.7                              |
| <i>Minuartia douglasii</i>                            | Douglas' sandwort         | native                | annual herb           | -                                | -                           | -                           | 3                                |
| <i>Monardella villosa</i> ssp. <i>villosa</i>         | Coyote mint               | native                | perennial herb        | -                                | -                           | -                           | -                                |



| Scientific Name                                         | Common Name              | Origin     | Form                  | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|--------------------------|------------|-----------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Monardella viridis</i>                               | Green monardella         | native     | perennial herb        | Rank 4.3                         | -                           | -                           | 1                                |
| <i>Montia fontana</i>                                   | Water montia             | native     | annual herb           | -                                | -                           | OBL                         | -                                |
| <i>Morus alba</i>                                       | Mulberry                 | non-native | tree                  | -                                | -                           | FACU                        | -                                |
| <i>Muhlenbergia rigens</i>                              | Deergrass                | native     | perennial grass       | -                                | -                           | FAC                         | -                                |
| <i>Myriophyllum</i> sp.                                 | Water-milfoil            | non-native | perennial herb        | -                                | -                           | OBL                         | -                                |
| <i>Myriopteris covillei</i>                             | Coville's lip fern       | native     | fern                  | -                                | -                           | -                           | -                                |
| <i>Narcissus pseudonarcissus</i>                        | Daffodil                 | non-native | perennial herb (bulb) | -                                | -                           | -                           | -                                |
| <i>Navarretia atractyloides</i>                         | Holly leaf navarretia    | native     | annual herb           | -                                | -                           | -                           | -                                |
| <i>Navarretia cotulifolia</i>                           | Cotula navarretia        | native     | annual herb           | Rank 4.2                         | -                           | OBL                         | -                                |
| <i>Navarretia intertexta</i>                            | Interwoven navarretia    | native     | annual herb           | -                                | -                           | FACW                        | -                                |
| <i>Navarretia jepsonii</i>                              | Jepson's navarretia      | native     | annual herb           | Rank 4.3                         | -                           | FACW                        | 5.6                              |
| <i>Navarretia leucocephala</i> ssp. <i>leucocephala</i> | White headed navarretia  | native     | annual herb           | -                                | -                           | OBL                         | -                                |
| <i>Navarretia mellita</i>                               | Skunk navarretia         | native     | annual herb           | -                                | -                           | FAC                         | -                                |
| <i>Navarretia pubescens</i>                             | Purple navarretia        | native     | annual herb           | -                                | -                           | -                           | 2                                |
| <i>Navarretia squarrosa</i>                             | Skunkweed                | native     | annual herb           | -                                | -                           | FACU                        | -                                |
| <i>Nemacladus montanus</i>                              | Mountain nemacladus      | native     | annual herb           | -                                | -                           | -                           | 6                                |
| <i>Nemophila heterophylla</i>                           | Canyon nemophila         | native     | annual herb           | -                                | -                           | -                           | -                                |
| <i>Nemophila menziesii</i> var. <i>atomaria</i>         | Baby blue eyes           | native     | annual herb           | -                                | -                           | -                           | -                                |
| <i>Nemophila menziesii</i> var. <i>menziesii</i>        | Baby blue eyes           | native     | annual herb           | -                                | -                           | -                           | -                                |
| <i>Nemophila parviflora</i> var. <i>parviflora</i>      | Small flowered nemophila | native     | annual herb           | -                                | -                           | -                           | -                                |
| <i>Nicotiana acuminata</i> var. <i>multiflora</i>       | Many flowered tobacco    | non-native | annual herb           | -                                | -                           | -                           | -                                |

| Scientific Name                                          | Common Name                | Origin                | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------|----------------------------|-----------------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Oemleria cerasiformis</i>                             | Oso berry                  | native                | shrub                    | -                                | -                           | FACU                        | -                                |
| <i>Packera eurycephala</i> var. <i>eurycephala</i>       | Widehead groundsel         | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Packera greenei</i>                                   | Flame ragwort              | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Parentucellia viscosa</i>                             | Yellow glandweed           | non-native (invasive) | annual herb              | -                                | Limited                     | FAC                         | -                                |
| <i>Paspalum dilatatum</i>                                | Dallis grass               | non-native            | perennial grass          | -                                | -                           | FAC                         | -                                |
| <i>Pectocarya pusilla</i>                                | Little pectocarya          | native                | annual herb              | -                                | -                           | -                           | 1.3                              |
| <i>Pedicularis densiflora</i>                            | Indian warrior             | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Pellaea andromedifolia</i>                            | Coffee fern                | native                | fern                     | -                                | -                           | -                           | -                                |
| <i>Pellaea mucronata</i> var. <i>mucronata</i>           | Bird's foot fern           | native                | fern                     | -                                | -                           | -                           | -                                |
| <i>Penstemon heterophyllus</i> var. <i>heterophyllus</i> | Foothill penstemon         | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Penstemon heterophyllus</i> var. <i>purdyi</i>        | Purdy's foothill penstemon | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Pentagramma triangularis</i>                          | Gold back fern             | native                | fern                     | -                                | -                           | -                           | -                                |
| <i>Perideridia gairdneri</i> ssp. <i>borealis</i>        | Northern Gairdner's yampah | native                | perennial herb           | -                                | -                           | FAC                         | -                                |
| <i>Perideridia kelloggii</i>                             | Kellogg's yampah           | native                | perennial herb           | -                                | -                           | -                           | 2.1                              |
| <i>Persicaria amphibia</i>                               | Water smartweed            | native                | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Persicaria maculosa</i>                               | Spotted ladythumb          | non-native            | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Persicaria punctata</i>                               | Dotted smartweed           | native                | perennial herb           | -                                | -                           | OBL                         | -                                |
| <i>Petrorhagia dubia</i>                                 | Windmill pink              | non-native            | annual herb              | -                                | -                           | -                           | -                                |
| <i>Phacelia distans</i>                                  | Common phacelia            | native                | annual herb              | -                                | -                           | OBL                         | 1.1                              |
| <i>Phacelia imbricata</i> var. <i>imbricata</i>          | Imbricate phacelia         | native                | annual herb              | -                                | -                           | -                           | -                                |



| Scientific Name                                            | Common Name                  | Origin                | Form              | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|------------------------------------------------------------|------------------------------|-----------------------|-------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Phalaris aquatica</i>                                   | Harding grass                | non-native (invasive) | perennial grass   | -                                | Moderate                    | FACU                        | -                                |
| <i>Phalaris lemmonii</i>                                   | Lemmon's canarygrass         | native                | annual grass      | -                                | -                           | FACW                        | -                                |
| <i>Phalaris minor</i>                                      | Mediterranean canarygrass    | non-native            | annual grass      | -                                | -                           | -                           | -                                |
| <i>Phalaris paradoxa</i>                                   | Hood canarygrass             | non-native            | annual grass      | -                                | -                           | FAC                         | -                                |
| <i>Phoradendron bolleanum</i>                              | Bollean mistletoe            | native                | shrub (parasitic) | -                                | -                           | -                           | -                                |
| <i>Phoradendron leucarpum</i> ssp. <i>tomentosum</i>       | Mistletoe                    | native                | shrub (parasitic) | -                                | -                           | -                           | -                                |
| <i>Phyla nodiflora</i>                                     | Common lippia                | native                | perennial herb    | -                                | -                           | FACW                        | -                                |
| <i>Physalis lanceifolia</i>                                | Narrow leaf tomatillo        | non-native            | annual herb       | -                                | -                           | UPL                         | -                                |
| <i>Pickeringia montana</i> var. <i>montana</i>             | Chaparral pea                | native                | shrub             | -                                | -                           | -                           | -                                |
| <i>Pinus attenuata</i>                                     | Knobcone pine                | native                | tree              | -                                | -                           | -                           | 2.5                              |
| <i>Pinus ponderosa</i> var. <i>pacifica</i>                | Pacific ponderosa pine       | native                | tree              | -                                | -                           | FACU                        | -                                |
| <i>Pinus sabiniana</i>                                     | Bull pine                    | native                | tree              | -                                | -                           | -                           | 1.4                              |
| <i>Piperia transversa</i>                                  | Mountain piperia             | native                | perennial herb    | -                                | -                           | -                           | -                                |
| <i>Plagiobothrys bracteatus</i>                            | Bracted allocarya            | native                | annual herb       | -                                | -                           | FACW                        | -                                |
| <i>Plagiobothrys fulvus</i> var. <i>campestris</i>         | Tawny popcorn flower         | native                | annual herb       | -                                | -                           | -                           | -                                |
| <i>Plagiobothrys glyptocarpus</i> var. <i>glyptocarpus</i> | Sculptured allocarya         | native                | annual herb       | -                                | -                           | FACW                        | -                                |
| <i>Plagiobothrys greenei</i>                               | Greene's allocarya           | native                | annual herb       | -                                | -                           | FACW                        | -                                |
| <i>Plagiobothrys nothofulvus</i>                           | Rusty haired popcorn flower  | native                | annual herb       | -                                | -                           | FAC                         | -                                |
| <i>Plagiobothrys stipitatus</i> var. <i>micranthus</i>     | Common vernal pool allocarya | native                | annual herb       | -                                | -                           | FACW                        | -                                |
| <i>Plantago coronopus</i>                                  | Cut leaf plantain            | non-native            | annual herb       | -                                | -                           | FAC                         | -                                |
| <i>Plantago erecta</i>                                     | California plantain          | native                | annual herb       | -                                | -                           | -                           | 1                                |

| Scientific Name                                          | Common Name               | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|----------------------------------------------------------|---------------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Plantago lanceolata</i>                               | Ribwort                   | non-native (invasive) | perennial herb         | -                                | Limited                     | FAC                         | -                                |
| <i>Plantago patagonica</i>                               | Patagonia plantain        | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Platanus ×hispanica</i>                               | London plane tree         | non-native            | tree                   | -                                | -                           | -                           | -                                |
| <i>Platystemon californicus</i>                          | Cream cups                | native                | annual herb            | -                                | -                           | -                           | 1.7                              |
| <i>Plectritis ciliosa</i>                                | Long spurred plectritis   | native                | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Plectritis macrocera</i>                              | Plectritis                | native                | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Pleuropogon californicus</i> var. <i>californicus</i> | Annual semaphoregrass     | native                | annual grass           | -                                | -                           | OBL                         | -                                |
| <i>Poa annua</i>                                         | Annual blue grass         | non-native            | annual grass           | -                                | -                           | FAC                         | -                                |
| <i>Poa bulbosa</i> ssp. <i>bulbosa</i>                   | Bulbous blue grass        | non-native            | perennial grass        | -                                | -                           | FACU                        | -                                |
| <i>Poa pratensis</i> ssp. <i>pratensis</i>               | Kentucky blue grass       | non-native (invasive) | perennial grass        | -                                | Limited                     | FAC                         | -                                |
| <i>Poa secunda</i> ssp. <i>secunda</i>                   | Sandberg's bluegrass      | native                | perennial grass        | -                                | -                           | FACU                        | -                                |
| <i>Pogogyne douglasii</i>                                | Douglas' pogogyne         | native                | annual herb            | -                                | -                           | OBL                         | -                                |
| <i>Pogogyne zizyphoroides</i>                            | Sacramento mint           | native                | annual herb            | -                                | -                           | OBL                         | -                                |
| <i>Polygala californica</i>                              | Milkwort                  | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Polygonum aviculare</i> ssp. <i>aviculare</i>         | Prostrate knotweed        | non-native            | annual, perennial herb | -                                | -                           | FACW                        | -                                |
| <i>Polypodium californicum</i>                           | California polypody       | native                | fern                   | -                                | -                           | -                           | -                                |
| <i>Polypodium calirhiza</i>                              | Licorice fern             | native                | fern                   | -                                | -                           | -                           | -                                |
| <i>Polypogon interruptus</i>                             | Ditch beard grass         | non-native            | perennial grass        | -                                | -                           | FACW                        | -                                |
| <i>Polypogon maritimus</i>                               | Mediterranean beard grass | non-native            | annual grass           | -                                | -                           | OBL                         | -                                |
| <i>Polypogon monspeliensis</i>                           | Annual beard grass        | non-native (invasive) | annual grass           | -                                | Limited                     | FACW                        | -                                |
| <i>Populus fremontii</i> ssp. <i>fremontii</i>           | Cottonwood                | native                | tree                   | -                                | -                           | FAC                         | -                                |



| Scientific Name                                         | Common Name          | Origin                | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|----------------------|-----------------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Portulaca oleracea</i>                               | Common purslane      | non-native            | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Primula hendersonii</i>                              | Mosquito bill        | native                | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Prunus cerasifera</i>                                | Cherry plum          | non-native (invasive) | tree                     | -                                | Limited                     | -                           | -                                |
| <i>Pseudognaphalium californicum</i>                    | Ladies' tobacco      | native                | annual, perennial herb   | -                                | -                           | -                           | -                                |
| <i>Pseudognaphalium luteoalbum</i>                      | Jersey cudweed       | non-native            | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Pseudotsuga menziesii</i> var. <i>menziesii</i>      | Douglas fir          | native                | tree                     | -                                | -                           | FACU                        | -                                |
| <i>Psilocarphus brevissimus</i> var. <i>brevissimus</i> | Woolly heads         | native                | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Psilocarphus chilensis</i>                           | Round woolly marbles | native                | annual herb              | -                                | -                           | FACW                        | -                                |
| <i>Pteridium aquilinum</i> var. <i>pubescens</i>        | Western bracken fern | native                | fern                     | -                                | -                           | FACU                        | -                                |
| <i>Pterostegia drymarioides</i>                         | Fairy mist           | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Quercus ×morehus</i>                                 | Oracle oak           | native                | tree                     | -                                | -                           | -                           | -                                |
| <i>Quercus berberidifolia</i>                           | Inland scrub oak     | native                | tree                     | -                                | -                           | -                           | -                                |
| <i>Quercus chrysolepis</i>                              | Gold cup live oak    | native                | tree                     | -                                | -                           | -                           | -                                |
| <i>Quercus douglasii</i>                                | Blue oak             | native                | tree                     | -                                | -                           | -                           | -                                |
| <i>Quercus durata</i> var. <i>durata</i>                | Leather oak          | native                | shrub                    | -                                | -                           | -                           | 5.8                              |
| <i>Quercus kelloggii</i>                                | California black oak | native                | tree                     | -                                | -                           | -                           | -                                |
| <i>Quercus lobata</i>                                   | Valley oak           | native                | tree                     | -                                | -                           | FACU                        | -                                |
| <i>Quercus wislizeni</i> var. <i>wislizeni</i>          | Interior live oak    | native                | tree, shrub              | -                                | -                           | -                           | -                                |
| <i>Rafinesquia californica</i>                          | California chicory   | native                | annual herb              | -                                | -                           | -                           | -                                |
| <i>Ranunculus aquatilis</i> var. <i>aquatilis</i>       | Whitewater crowfoot  | native                | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Ranunculus californicus</i> var. <i>californicus</i> | Common buttercup     | native                | perennial herb           | -                                | -                           | FACU                        | -                                |

| Scientific Name                                         | Common Name                 | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|-----------------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Ranunculus hebecarpus</i>                            | Pubescent fruited buttercup | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Ranunculus muricatus</i>                             | Buttercup                   | non-native            | annual, perennial herb | -                                | -                           | FACW                        | -                                |
| <i>Ranunculus occidentalis</i> var. <i>occidentalis</i> | Western buttercup           | native                | perennial herb         | -                                | -                           | FAC                         | -                                |
| <i>Raphanus raphanistrum</i>                            | Jointed charlock            | non-native            | annual, perennial herb | -                                | -                           | -                           | -                                |
| <i>Raphanus sativus</i>                                 | Wild radish                 | non-native (invasive) | annual, biennial herb  | -                                | Limited                     | -                           | -                                |
| <i>Rhamnus ilicifolia</i>                               | Evergreen buckthorn         | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Rhododendron occidentale</i>                         | Western azalea              | native                | tree, shrub            | -                                | -                           | FAC                         | -                                |
| <i>Rhus aromatica</i>                                   | Fragrant sumac              | native                | shrub                  | -                                | -                           | FACU                        | -                                |
| <i>Ribes malvaceum</i> var. <i>malvaceum</i>            | Chaparral currant           | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Rigiopappus leptocladus</i>                          | Wire weed                   | native                | annual herb            | -                                | -                           | -                           | 1.9                              |
| <i>Robinia pseudoacacia</i>                             | Black locust                | non-native (invasive) | tree                   | -                                | Limited                     | FACU                        | -                                |
| <i>Rosa californica</i>                                 | California wild rose        | native                | shrub                  | -                                | -                           | FAC                         | -                                |
| <i>Rubus armeniacus</i>                                 | Himalayan blackberry        | non-native (invasive) | shrub                  | -                                | High                        | FAC                         | -                                |
| <i>Rumex crispus</i>                                    | Curly dock                  | non-native (invasive) | perennial herb         | -                                | Limited                     | FAC                         | -                                |
| <i>Rumex pulcher</i>                                    | Fiddleleaf dock             | non-native            | perennial herb         | -                                | -                           | FAC                         | -                                |
| <i>Salix breweri</i>                                    | Serpentine willow           | native                | shrub                  | -                                | -                           | FAC                         | 6                                |
| <i>Salix exigua</i> var. <i>hindsiana</i>               | Sandbar willow              | native                | tree, shrub            | -                                | -                           | FACW                        | -                                |
| <i>Salix gooddingii</i>                                 | Gooding's willow            | native                | tree                   | -                                | -                           | FACW                        | -                                |
| <i>Salix laevigata</i>                                  | Polished willow             | native                | tree                   | -                                | -                           | FACW                        | -                                |
| <i>Salix lasiolepis</i>                                 | Arroyo willow               | native                | tree, shrub            | -                                | -                           | FACW                        | -                                |
| <i>Salsola</i> sp.                                      | Russian thistle             | non-native            | annual herb            | -                                | -                           | -                           | -                                |



| Scientific Name                                       | Common Name            | Origin     | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------------------------------|------------------------|------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Salvia columbariae</i>                             | Chia sage              | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Salvia sonomensis</i>                              | Sonoma sage            | native     | perennial herb           | -                                | -                           | -                           | 1.6                              |
| <i>Sambucus nigra</i> ssp. <i>caerulea</i>            | Blue elderberry        | native     | shrub                    | -                                | -                           | FAC                         | -                                |
| <i>Sanicula bipinnata</i>                             | Poison sanicle         | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Sanicula bipinnatifida</i>                         | Purple sanicle         | native     | perennial herb           | -                                | -                           | -                           | 1.8                              |
| <i>Sanicula crassicaulis</i>                          | Pacific sanicle        | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Sanicula tuberosa</i>                              | Turkey pea             | native     | perennial herb           | -                                | -                           | -                           | 1.3                              |
| <i>Schoenoplectus acutus</i> var. <i>occidentalis</i> | Tule                   | native     | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Schoenoplectus tabernaemontani</i>                 | Softstem bulrush       | native     | perennial grasslike herb | -                                | -                           | OBL                         | -                                |
| <i>Scleranthus annuus</i> ssp. <i>annuus</i>          | German knotgrass       | non-native | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Scrophularia californica</i>                       | California bee plant   | native     | perennial herb           | -                                | -                           | FAC                         | -                                |
| <i>Scutellaria antirrhinoides</i>                     | Snapdragon skullcap    | native     | perennial herb           | -                                | -                           | -                           | 2.3                              |
| <i>Scutellaria californica</i>                        | California skullcap    | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Scutellaria siphocampyloides</i>                   | Gray leaved skullcap   | native     | perennial herb           | -                                | -                           | FACU                        | -                                |
| <i>Scutellaria tuberosa</i>                           | Dannie's skullcap      | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Senecio aronicoides</i>                            | Butterweed             | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Senecio clevelandii</i> var. <i>clevelandii</i>    | Cleveland's ragwort    | native     | perennial herb           | Rank 4.3                         | -                           | -                           | -                                |
| <i>Senecio vulgaris</i>                               | Common groundsel       | non-native | annual herb              | -                                | -                           | FACU                        | -                                |
| <i>Sherardia arvensis</i>                             | Field madder           | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Sidalcea diploscypha</i>                           | Fringed checker mallow | native     | annual herb              | -                                | -                           | -                           | 2.6                              |
| <i>Sidalcea hartwegii</i>                             | Hartweg's checkerbloom | native     | annual herb              | -                                | -                           | -                           | 1.6                              |
| <i>Sidalcea hirsuta</i>                               | Hairy checkerbloom     | native     | annual herb              | -                                | -                           | OBL                         | -                                |

| Scientific Name                                 | Common Name                 | Origin                | Form                   | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------------------------|-----------------------------|-----------------------|------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Sidalcea keckii</i>                          | Keck's checkerbloom         | native                | annual herb            | FE, Rank 1B.1                    | -                           | -                           | 3                                |
| <i>Silene gallica</i>                           | Common catchfly             | non-native            | annual herb            | -                                | -                           | -                           | -                                |
| <i>Silene laciniata</i> ssp. <i>californica</i> | California indian pink      | native                | perennial herb         | -                                | -                           | -                           | -                                |
| <i>Silybum marianum</i>                         | Milk thistle                | non-native (invasive) | annual, perennial herb | -                                | Limited                     | -                           | -                                |
| <i>Sisymbrium irio</i>                          | London rocket               | non-native (invasive) | annual herb            | -                                | Moderate                    | -                           | -                                |
| <i>Sisymbrium officinale</i>                    | Hedge mustard               | non-native            | annual herb            | -                                | -                           | -                           | -                                |
| <i>Sisyrinchium bellum</i>                      | Blue eyed grass             | native                | perennial herb         | -                                | -                           | FACW                        | -                                |
| <i>Solanum parishii</i>                         | Parish's purple nightshade  | native                | shrub                  | -                                | -                           | -                           | -                                |
| <i>Solanum xanti</i>                            | Nightshade                  | native                | perennial herb, shrub  | -                                | -                           | -                           | -                                |
| <i>Solidago elongata</i>                        | West coast canada goldenrod | native                | perennial herb         | -                                | -                           | FACU                        | -                                |
| <i>Soliva sessilis</i>                          | South american soliva       | non-native            | annual herb            | -                                | -                           | FACU                        | -                                |
| <i>Sonchus asper</i> ssp. <i>asper</i>          | Prickly sow thistle         | non-native            | annual herb            | -                                | -                           | FAC                         | -                                |
| <i>Sonchus oleraceus</i>                        | Common sow thistle          | non-native            | annual herb            | -                                | -                           | UPL                         | -                                |
| <i>Sorghum halepense</i>                        | Johnsongrass                | non-native            | perennial grass        | -                                | -                           | FACU                        | -                                |
| <i>Spartium junceum</i>                         | Spanish broom               | non-native (invasive) | shrub                  | -                                | High                        | -                           | -                                |
| <i>Spergularia rubra</i>                        | Purple sand spurry          | non-native            | annual, perennial herb | -                                | -                           | FAC                         | -                                |
| <i>Spiranthes porrifolia</i>                    | Western ladies tresses      | native                | perennial herb         | -                                | -                           | FACW                        | -                                |
| <i>Stachys albens</i>                           | Cobwebby hedge nettle       | native                | perennial herb         | -                                | -                           | OBL                         | -                                |
| <i>Stachys rigida</i> var. <i>quercetorum</i>   | Rough hedgenettle           | native                | perennial herb         | -                                | -                           | FACW                        | -                                |
| <i>Stebbinsoseris heterocarpa</i>               | Grassland stebbinsoseris    | native                | annual herb            | -                                | -                           | -                           | -                                |
| <i>Stellaria media</i>                          | Chickweed                   | non-native            | annual herb            | -                                | -                           | FACU                        | -                                |



| Scientific Name                                         | Common Name             | Origin                | Form                         | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|---------------------------------------------------------|-------------------------|-----------------------|------------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Stephanomeria virgata</i> ssp. <i>pleurocarpa</i>    | Tall stephanomeria      | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Stipa cernua</i>                                     | Nodding needle grass    | native                | perennial grass              | -                                | -                           | -                           | -                                |
| <i>Stipa lepida</i>                                     | Foothill needle grass   | native                | perennial grass              | -                                | -                           | -                           | -                                |
| <i>Stipa miliacea</i> var. <i>miliacea</i>              | Smilo grass             | non-native (invasive) | perennial grass              | -                                | Limited                     | -                           | -                                |
| <i>Stipa pulchra</i>                                    | Purple needle grass     | native                | perennial grass              | -                                | -                           | -                           | -                                |
| <i>Streptanthus breweri</i>                             | Brewer's jewelflower    | native                | annual herb                  | -                                | -                           | -                           | 5.7                              |
| <i>Streptanthus glandulosus</i> ssp. <i>glandulosus</i> | Jewelflower             | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Streptanthus hesperidis</i>                          | Green jewel-flower      | native                | annual herb                  | Rank 1B.2                        | -                           | -                           | -                                |
| <i>Streptanthus morrisonii</i>                          | Morrison's jewelflower  | native                | perennial herb               | Rank 1B.2                        | -                           | -                           | 6.1                              |
| <i>Symphoricarpos albus</i> var. <i>laevigatus</i>      | Common snowberry        | native                | shrub                        | -                                | -                           | FACU                        | -                                |
| <i>Symphoricarpos mollis</i>                            | Creeping snowberry      | native                | shrub                        | -                                | -                           | FACU                        | -                                |
| <i>Tamarix parviflora</i>                               | Tamarisk                | non-native (invasive) | tree, shrub                  | -                                | High                        | FAC                         | -                                |
| <i>Taraxacum officinale</i>                             | Red seeded dandelion    | non-native            | perennial herb               | -                                | -                           | FACU                        | -                                |
| <i>Taraxia ovata</i>                                    | Sun cup                 | native                | perennial herb               | -                                | -                           | -                           | -                                |
| <i>Tetrapteron graciliflorum</i>                        | Hill sun cup            | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Thalictrum fendleri</i> var. <i>polycarpum</i>       | Torrey's meadow rue     | native                | perennial herb               | -                                | -                           | FAC                         | -                                |
| <i>Thermopsis californica</i> var. <i>californica</i>   | California goldenbanner | native                | perennial herb (rhizomatous) | -                                | -                           | -                           | -                                |
| <i>Thysanocarpus curvipes</i> ssp. <i>curvipes</i>      | Fringe pod              | native                | annual herb                  | -                                | -                           | -                           | -                                |
| <i>Torilis arvensis</i>                                 | Field hedge parsley     | non-native (invasive) | annual herb                  | -                                | Moderate                    | -                           | -                                |

| Scientific Name                                        | Common Name              | Origin                | Form           | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|--------------------------------------------------------|--------------------------|-----------------------|----------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Torilis nodosa</i>                                  | Wild parsley             | non-native            | annual herb    | -                                | -                           | -                           | -                                |
| <i>Toxicodendron diversilobum</i>                      | Poison oak               | native                | vine, shrub    | -                                | -                           | FACU                        | -                                |
| <i>Toxicoscordion fontanum</i>                         | Marsh zigadenus          | native                | perennial herb | Rank 4.2                         | -                           | OBL                         | -                                |
| <i>Toxicoscordion fremontii</i>                        | Fremont's star lily      | native                | perennial herb | -                                | -                           | -                           | -                                |
| <i>Toxicoscordion micranthum</i>                       | Small flowered star lily | native                | perennial herb | -                                | -                           | OBL                         | -                                |
| <i>Tragopogon porrifolius</i>                          | Salsify                  | non-native            | perennial herb | -                                | -                           | -                           | -                                |
| <i>Tribulus terrestris</i>                             | Puncture vine            | non-native (invasive) | annual herb    | -                                | Limited                     | -                           | -                                |
| <i>Trichostema lanceolatum</i>                         | Vinegarweed              | native                | annual herb    | -                                | -                           | FACU                        | -                                |
| <i>Trichostema laxum</i>                               | Turpentine weed          | native                | annual herb    | -                                | -                           | -                           | 4                                |
| <i>Trifolium albopurpureum</i>                         | Indian clover            | native                | annual herb    | -                                | -                           | FACU                        | -                                |
| <i>Trifolium bifidum</i> var. <i>bifidum</i>           | Pinole clover            | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Trifolium campestre</i>                             | Hop clover               | non-native            | annual herb    | -                                | -                           | -                           | -                                |
| <i>Trifolium ciliolatum</i>                            | Tree clover              | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Trifolium depauperatum</i> var. <i>depauperatum</i> | Dwarf sack clover        | native                | annual herb    | -                                | -                           | FAC                         | -                                |
| <i>Trifolium depauperatum</i> var. <i>truncatum</i>    | Dwarf sack clover        | native                | annual herb    | -                                | -                           | FAC                         | -                                |
| <i>Trifolium dichotomum</i>                            | Branched indian clover   | native                | annual herb    | -                                | -                           | -                           | -                                |
| <i>Trifolium dubium</i>                                | Shamrock                 | non-native            | annual herb    | -                                | -                           | UPL                         | -                                |
| <i>Trifolium fucatum</i>                               | Bull clover              | native                | annual herb    | -                                | -                           | FACU                        | 1.3                              |
| <i>Trifolium glomeratum</i>                            | Clustered clover         | non-native            | annual herb    | -                                | -                           | -                           | -                                |
| <i>Trifolium gracilentum</i>                           | Pin point clover         | native                | annual herb    | -                                | -                           | -                           | 1                                |
| <i>Trifolium hirtum</i>                                | Rose clover              | non-native (invasive) | annual herb    | -                                | Limited                     | -                           | -                                |
| <i>Trifolium incarnatum</i>                            | Crimson clover           | non-native            | annual herb    | -                                | -                           | -                           | -                                |



| Scientific Name                                        | Common Name                      | Origin     | Form                     | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|--------------------------------------------------------|----------------------------------|------------|--------------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Trifolium microcephalum</i>                         | Small head clover                | native     | annual herb              | -                                | -                           | FAC                         | 1.4                              |
| <i>Trifolium microdon</i>                              | Valparaiso clover                | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Trifolium pratense</i>                              | Red clover                       | non-native | perennial herb           | -                                | -                           | FACU                        | -                                |
| <i>Trifolium subterraneum</i>                          | Subterranean clover              | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Trifolium tomentosum</i>                            | Woolly clover                    | non-native | annual herb              | -                                | -                           | -                           | -                                |
| <i>Trifolium variegatum</i> var. <i>geminiflorum</i>   | Small-flowered variegated clover | native     | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Trifolium variegatum</i> var. <i>major</i>          | Large variegated clover          | native     | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Trifolium variegatum</i> var. <i>variegatum</i>     | Variegated clover                | native     | annual herb              | -                                | -                           | FAC                         | -                                |
| <i>Trifolium willdenovii</i>                           | Tomcat clover                    | native     | annual herb              | -                                | -                           | FACW                        | 1.3                              |
| <i>Triglochin scilloides</i>                           | Flowering-quillwort              | native     | annual herb (aquatic)    | -                                | -                           | OBL                         | -                                |
| <i>Triphysaria eriantha</i> ssp. <i>eriantha</i>       | Butter 'n' eggs                  | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Triphysaria pusilla</i>                             | Little owl's clover              | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Triphysaria versicolor</i> ssp. <i>faucibarbata</i> | Yellow owl's clover              | native     | annual herb              | -                                | -                           | -                           | -                                |
| <i>Triteleia hyacinthina</i>                           | Wild hyacinth                    | native     | perennial herb           | -                                | -                           | FAC                         | -                                |
| <i>Triteleia laxa</i>                                  | Ithuriel's spear                 | native     | perennial herb           | -                                | -                           | -                           | -                                |
| <i>Triteleia lugens</i>                                | Dark-mouthed triteleia           | native     | perennial herb           | Rank 4.3                         | -                           | -                           | -                                |
| <i>Triteleia peduncularis</i>                          | Marsh triteleia                  | native     | perennial herb           | -                                | -                           | FACW                        | 3.8                              |
| <i>Typha angustifolia</i>                              | Narrow leaf cattail              | non-native | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Typha latifolia</i>                                 | Broadleaf cattail                | native     | perennial herb (aquatic) | -                                | -                           | OBL                         | -                                |
| <i>Ulmus pumila</i>                                    | Siberian elm                     | non-native | tree                     | -                                | -                           | UPL                         | -                                |
| <i>Umbellularia californica</i>                        | California bay                   | native     | tree                     | -                                | -                           | FAC                         | -                                |

| Scientific Name                                  | Common Name             | Origin                | Form              | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|--------------------------------------------------|-------------------------|-----------------------|-------------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Uropappus lindleyi</i>                        | Silver puffs            | native                | annual herb       | -                                | -                           | -                           | -                                |
| <i>Urtica dioica</i> ssp. <i>holosericea</i>     | Stinging nettle         | native                | perennial herb    | -                                | -                           | FAC                         | -                                |
| <i>Velezia rigida</i>                            | Velezia                 | non-native            | annual herb       | -                                | -                           | -                           | -                                |
| <i>Verbascum blattaria</i>                       | Moth mullein            | non-native            | perennial herb    | -                                | -                           | UPL                         | -                                |
| <i>Verbascum thapsus</i>                         | Woolly mullein          | non-native (invasive) | perennial herb    | -                                | Limited                     | FACU                        | -                                |
| <i>Verbena lasiostachys</i> var. <i>scabrida</i> | Robust vervain          | native                | perennial herb    | -                                | -                           | FAC                         | -                                |
| <i>Veronica anagallis-aquatica</i>               | Water speedwell         | non-native            | perennial herb    | -                                | -                           | OBL                         | -                                |
| <i>Veronica peregrina</i> ssp. <i>xalapensis</i> | Speedwell               | native                | annual herb       | -                                | -                           | FAC                         | -                                |
| <i>Vicia benghalensis</i>                        | Purple vetch            | non-native            | annual herb, vine | -                                | -                           | -                           | -                                |
| <i>Vicia sativa</i> ssp. <i>nigra</i>            | Smaller common vetch    | non-native            | annual herb, vine | -                                | -                           | FACU                        | -                                |
| <i>Vicia sativa</i> ssp. <i>sativa</i>           | Common vetch            | non-native            | annual herb, vine | -                                | -                           | FACU                        | -                                |
| <i>Vicia villosa</i> ssp. <i>varia</i>           | Smooth vetch            | non-native            | annual herb, vine | -                                | -                           | -                           | -                                |
| <i>Vicia villosa</i> ssp. <i>villosa</i>         | Hairy vetch             | non-native            | annual herb, vine | -                                | -                           | -                           | -                                |
| <i>Viola douglasii</i>                           | Douglas' violet         | native                | perennial herb    | -                                | -                           | -                           | 2.8                              |
| <i>Viola purpurea</i> ssp. <i>quercetorum</i>    | Goosefoot yellow violet | native                | perennial herb    | -                                | -                           | -                           | -                                |
| <i>Vitis californica</i>                         | California wild grape   | native                | vine, shrub       | -                                | -                           | FACU                        | -                                |
| <i>Vitis vinifera</i>                            | Cultivated grape        | non-native            | vine, shrub       | -                                | -                           | -                           | -                                |
| <i>Whipplea modesta</i>                          | Modesty                 | native                | vine, shrub       | -                                | -                           | -                           | -                                |
| <i>Woodwardia fimbriata</i>                      | Western chain fern      | native                | fern              | -                                | -                           | OBL                         | -                                |
| <i>Wyethia angustifolia</i>                      | Narrow leaved mule ears | native                | perennial herb    | -                                | -                           | FACU                        | -                                |



| Scientific Name               | Common Name            | Origin | Form           | Conservation Status <sup>1</sup> | Cal-IPC Status <sup>2</sup> | Wetland Status <sup>3</sup> | Serpentine Affinity <sup>4</sup> |
|-------------------------------|------------------------|--------|----------------|----------------------------------|-----------------------------|-----------------------------|----------------------------------|
| <i>Wyethia glabra</i>         | Smooth mule ears       | native | perennial herb | -                                | -                           | -                           | -                                |
| <i>Wyethia helenioides</i>    | Gray mule ears         | native | perennial herb | -                                | -                           | -                           | -                                |
| <i>Xanthium strumarium</i>    | Cocklebur              | native | annual herb    | -                                | -                           | FAC                         | -                                |
| <i>Zannichellia palustris</i> | Horned pondweed        | native | perennial herb | -                                | -                           | OBL                         | -                                |
| <i>Zeltnera muehlenbergii</i> | Muehlenberg's centaury | native | annual herb    | -                                | -                           | FAC                         | -                                |
| <i>Zeltnera trichantha</i>    | Alkali centaury        | native | annual herb    | -                                | -                           | FAC                         | -                                |

<sup>1</sup>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)                               |

## <sup>2</sup>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.

## <sup>3</sup>Key to Wetland Status (Lichvar et al. 2016):

|             |                                                                                       |
|-------------|---------------------------------------------------------------------------------------|
| <b>OBL</b>  | Obligate plant; almost always occurs in wetlands.                                     |
| <b>FACW</b> | Facultative wetland plant; usually occurs in wetlands, but may occur in non-wetlands. |
| <b>FAC</b>  | Facultative plant; occurs in wetlands and nonwetlands.                                |
| <b>FACU</b> | Facultative upland plant; usually occurs in non-wetlands, but may occur in wetlands.  |
| <b>UPL</b>  | Upland plant; almost never occur in wetlands.                                         |

## <sup>4</sup>Key to Serpentine Affinity (Safford et al. 2005):

|             |                                         |
|-------------|-----------------------------------------|
| <b>6</b>    | 95–100% of records occur on ultramafics |
| <b>5</b>    | 85–94% of records occur on ultramafics  |
| <b>4</b>    | 75–84% of records occur on ultramafics  |
| <b>3</b>    | 65–74% of records occur on ultramafics  |
| <b>2</b>    | 55–64% of records occur on ultramafics  |
| <b>1</b>    | 45–54% of records occur on ultramafics  |
| <b>0.75</b> | 35–44% of records occur on ultramafics  |
| <b>0.5</b>  | 25–34% of records occur on ultramafics  |
| <b>0.25</b> | 15–24% of records occur on ultramafics  |
| <b>0.1</b>  | 0–14% of records occur on ultramafics   |
| <b>0</b>    | 0% of records occur on ultramafics      |



## **APPENDIX D**

### **POTENTIAL FOR SPECIAL-STATUS PLANT SPECIES TO OCCUR WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**





## Appendix D. Potential for Special-Status Plant Species to occur within the Phase 2/Open Space Study Area

List compiled from database searches focused on the following 7.5-minute USGS quadrangles: Aetna Springs, Calistoga, Chiles Valley, Clearlake Highlands, Detert Reservoir, Glascock Mountain, Jericho Valley, Knoxville, Lower Lake, Mark West Springs, Middletown, Mount Saint Helena, Saint Helena, Walter Springs, Whispering Pines, and Wilson Valley (CNPS 2019a, CDFW 2019a).

| Species                                                              | Conservation Status <sup>1</sup> | Habitat                                                                                                                                            | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                              | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purdy's onion<br><i>Allium fimbriatum</i> var. <i>purdyi</i>         | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 980 to 1970 feet (300 to 600 meters). Blooms Apr-Jun.                                        | <b>Moderate Potential.</b> Potentially suitable rocky, serpentine substrate in chaparral, foothill pine woodland, and Sargent cypress woodland habitats exists within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Napa false indigo<br><i>Amorpha californica</i> var. <i>napensis</i> | Rank 1B.2                        | Broadleaved upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 390 to 6560 feet (120 to 2000 meters). Blooms Apr-Jul. | <b>Moderate Potential.</b> Potentially suitable, cool, forested habitat on north-facing slopes and/or along draws exists within the Phase 2/Open Space Study Area, and the species is known from a nearby occurrence.                              | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| bent-flowered fiddleneck<br><i>Amsinckia lunaris</i>                 | Rank 1B.2                        | Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 5 to 1640 feet (3 to 500 meters). Blooms Mar-Jun.   | <b>Moderate Potential.</b> Potentially suitable grassland, chaparral, and scrub habitats exist within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences.                                                         | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| dimorphic snapdragon<br><i>Antirrhinum subcordatum</i>               | Rank 4.3                         | Chaparral, lower montane coniferous forest. Elevation ranges from 605 to 2625 feet (185 to 800 meters). Blooms Apr-Jul.                            | <b>Moderate Potential.</b> Potentially suitable chaparral, foothill pine woodland, and blue oak woodland on serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                        | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                     | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                  | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                  | Recommendations                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| twig-like snapdragon<br><i>Antirrhinum virga</i>                            | Rank 4.3                         | Chaparral, lower montane coniferous forest. Elevation ranges from 325 to 6610 feet (100 to 2015 meters). Blooms Jun-Jul.                                 | <b>Present.</b> This species was observed in two locations within the Phase 2/Open Space Study Area on rhyolite substrates in chaparral habitat. It has also been observed within the Phase 1 Phase 2/Open Space Study Area in deerweed scrub habitat. | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| modest rockcress<br><i>Arabis modesta</i>                                   | Rank 4.3                         | Chaparral, lower montane coniferous forest. Elevation ranges from 390 to 2625 feet (120 to 800 meters). Blooms Mar-Jul.                                  | <b>Moderate Potential.</b> Potentially suitable rocky chaparral, Sargent cypress, and Douglas fir forest habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                            | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Oregon rockcress<br><i>Arabis oregana</i>                                   | Rank 4.3                         | Chaparral, lower montane coniferous forest. Elevation ranges from 1965 to 6005 feet (600 to 1830 meters). Blooms May.                                    | <b>Moderate Potential.</b> Potentially suitable rocky chaparral, Sargent cypress, and Douglas fir forest habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                            | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Konocti manzanita<br><i>Arctostaphylos manzanita ssp. elegans</i>           | Rank 1B.3                        | Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 1295 to 5300 feet (395 to 1615 meters). Blooms (Jan)Mar-May(Jul). | <b>Present.</b> This species was observed at two locations within the Phase 2/Open Space Study Area, in openings in blue oak woodland, on soils mapped as being derived from sandstone and shale, south of Detert Reservoir.                           | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Rincon Ridge manzanita<br><i>Arctostaphylos stanfordiana ssp. decumbens</i> | Rank 1B.1                        | Chaparral (rhyolitic), cismontane woodland. Elevation ranges from 245 to 1215 feet (75 to 370 meters). Blooms Feb-Apr(May).                              | <b>Unlikely.</b> The species is limited to volcanic mudflows in the Mayacama Mountains, which is located outside of the Phase 2/Open Space Study Area.                                                                                                 | No further actions are recommended for this species.                                                                                                                                                                                              |



| Species                                                                      | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                             | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                        | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Raiche's manzanita<br><i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i> | Rank 1B.1                        | Chaparral, lower montane coniferous forest (openings). Elevation ranges from 1475 to 3395 feet (450 to 1035 meters). Blooms Feb-Apr.                                                | <b>Unlikely.</b> The Phase 2/Open Space Study Area is well outside of the known range of this species, which is known only from near the Lake/Mendocino County boundary west of Clear Lake and from far northern Mendocino County. The nearest known occurrence is approximately 15 miles northwest of the Phase 2/Open Space Study Area.                                                                                                    | No further actions are recommended for this species.                                                                                                                                                                                              |
| serpentine milkweed<br><i>Asclepias solanoana</i>                            | Rank 4.2                         | Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 750 to 6100 feet (230 to 1860 meters). Blooms May-Jul(Aug).                                  | <b>Moderate Potential.</b> Potentially suitable rocky, serpentine barrens exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                                                                                                                                                                          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Brewer's milk-vetch<br><i>Astragalus breweri</i>                             | Rank 4.2                         | Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly). Elevation ranges from 295 to 2395 feet (90 to 730 meters). Blooms Apr-Jun. | <b>Moderate Potential.</b> Potentially suitable chaparral, foothill pine woodland, Sargent cypress woodland, and grassland habitats on serpentine and volcanic substrates exist within the Phase 2/Open Space Study Area. This species was observed in a small number of locations in the central portion of the Phase 1 Phase 2/Open Space Study Area on rocky and fine-textured serpentine substrates in chaparral and grassland habitats. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Clara Hunt's milk-vetch<br><i>Astragalus claranus</i>                        | FE, ST, Rank 1B.1                | Chaparral (openings), cismontane woodland, valley and foothill grassland. Elevation ranges from 245 to 900 feet (75 to 275 meters). Blooms Mar-May.                                 | <b>Moderate Potential.</b> Potentially suitable thin, volcanic, seasonally moist clay soils exist within the Phase 2/Open Space Study Area, and this species is known from within the region.                                                                                                                                                                                                                                                | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                   | Conservation Status <sup>1</sup> | Habitat                                                                                                                                    | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                           | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cleveland's milk-vetch<br><i>Astragalus clevelandii</i>                   | Rank 4.3                         | Chaparral, cismontane woodland, riparian forest. Elevation ranges from 655 to 4920 feet (200 to 1500 meters). Blooms Jun-Sep.              | <b>Present.</b> This species was observed in several locations within the Phase 2/Open Space Study Area in and along ephemeral to intermittent streams on serpentine substrate.                                                                                                                                                                                                                                                                 | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Jepson's milk-vetch<br><i>Astragalus rattanii</i> var. <i>jepsonianus</i> | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 965 to 2295 feet (295 to 700 meters). Blooms Mar-Jun. | <b>High Potential.</b> Potentially suitable grassland or chaparral habitat on serpentine substrate exists within the Phase 2/Open Space Study Area. This taxon was observed within the Phase 1 Phase 2/Open Space Study Area at a single location on gravelly serpentine berms along an intermittent stream at the intersection of Butts Canyon Road and an unnamed paved road leading to the vineyards on the south side of Butts Canyon Road. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| big-scale balsamroot<br><i>Balsamorhiza macrolepis</i>                    | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 5100 feet (45 to 1555 meters). Blooms Mar-Jun. | <b>Moderate Potential.</b> Potentially suitable chaparral, grassland, and woodland habitats on serpentine and volcanic substrates exists within the Phase 2/Open Space Study Area. This species was observed in one location in the far northern portion of the Phase 1 Phase 2/Open Space Study Area in blue oak woodland.                                                                                                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| watershield<br><i>Brasenia schreberi</i>                                  | Rank 2B.3                        | Marshes and swamps (freshwater). Elevation ranges from 95 to 7220 feet (30 to 2200 meters). Blooms Jun-Sep.                                | <b>Moderate Potential.</b> Potentially suitable lake and reservoir habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                                                                                                                                                                           | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                              | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| narrow-anthered brodiaea<br><i>Brodiaea leptandra</i>      | Rank 1B.2                        | Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 360 to 3000 feet (110 to 915 meters). Blooms May-Jul.      | <b>Present.</b> This species was observed in one location in volcanic chaparral in the western portion of the Phase 1 Phase 2/Open Space Study Area.                                                                                                                                               | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Indian Valley brodiaea<br><i>Brodiaea rosea ssp. rosea</i> | SE, Rank 3.1                     | Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 1095 to 4755 feet (335 to 1450 meters). Blooms May-Jun.                                 | <b>Unlikely.</b> The Phase 2/Open Space Study Area is well outside of the known range of this species. Although the Phase 2/Open Space Study Area contains serpentine substrate, the nearest documented occurrence is approximately 16 miles north-northwest of the Phase 2/Open Space Study Area. | No further actions are recommended for this species.                                                                                                                                                                                              |
| serpentine reed grass<br><i>Calamagrostis ophitidis</i>    | Rank 4.3                         | Chaparral (open, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Elevation ranges from 295 to 3495 feet (90 to 1065 meters). Blooms Apr-Jul. | <b>Moderate Potential.</b> Potentially suitable rocky, serpentine habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                               | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| pink star-tulip<br><i>Calochortus uniflorus</i>            | Rank 4.2                         | Coastal prairie, coastal scrub, meadows and seeps, north coast coniferous forest. Elevation ranges from 30 to 3510 feet (10 to 1070 meters). Blooms Apr-Jun.                                                | <b>Present.</b> This species was observed at one location in the northern portion of the Phase 2/Open Space Study Area in a seasonally wet area on serpentine substrate.                                                                                                                           | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |

| Species                                                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                 | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                           | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| four-petaled pussypaws<br><i>Calyptridium quadripetalum</i>                | Rank 4.3                         | Chaparral, lower montane coniferous forest. Elevation ranges from 1030 to 6695 feet (315 to 2040 meters). Blooms Apr-Jun.                               | <b>Moderate Potential.</b> Potentially suitable sandy or gravelly serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                                                                                               | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Mt. Saint Helena morning-glory<br><i>Calystegia collina ssp. oxyphylla</i> | Rank 4.2                         | Chaparral, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 915 to 3315 feet (279 to 1010 meters). Blooms Apr-Jun. | <b>Present.</b> This taxon has been observed in numerous locations within the Phase 2/Open Space Study Area on rocky, serpentine substrate.                                                                                                                                                                                                                                     | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| South Coast Range morning-glory<br><i>Calystegia collina ssp. venusta</i>  | Rank 4.3                         | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 1390 to 4890 feet (425 to 1490 meters). Blooms Apr-Jun.            | <b>Moderate Potential.</b> Potentially suitable rocky, serpentine areas exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                                                                                                               | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| northern meadow sedge<br><i>Carex praticola</i>                            | Rank 2B.2                        | Meadows and seeps (mesic). Elevation ranges from 0 to 10500 feet (0 to 3200 meters). Blooms May-Jul.                                                    | <b>Unlikely.</b> Although the Phase 2/Open Space Study Area contains meadows and seeps, there is only one documented occurrence of this species in the region (approximately 6 miles west of the Phase 2/Open Space Study Area), and the identity of this occurrence is uncertain. The Phase 2/Open Space Study Area is otherwise well outside the known region of the species. | No further actions are recommended for this species.                                                                                                                                                                                              |



| Species                                                                 | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                               | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                | Recommendations                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| johnny-nip<br><i>Castilleja ambigua</i> var. <i>ambigua</i>             | Rank 4.2                         | Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools margins. Elevation ranges from 0 to 1425 feet (0 to 435 meters). Blooms Mar-Aug. | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable mesic grassland habitat with coastal influence required for this species.                                                                              | No further actions are recommended for this species.                                                                                                                                                                                              |
| pink creamsacs<br><i>Castilleja rubicundula</i> var. <i>rubicundula</i> | Rank 1B.2                        | Chaparral (openings), cismontane woodland, meadows and seeps, valley and foothill grassland. Elevation ranges from 65 to 2985 feet (20 to 910 meters). Blooms Apr-Jun.                                | <b>Moderate Potential.</b> Potentially suitable mesic, open areas on serpentine substrate in chaparral and grassland habitats exist within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences.      | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Rincon Ridge ceanothus<br><i>Ceanothus confusus</i>                     | Rank 1B.1                        | Closed-cone coniferous forest, chaparral, cismontane woodland. Elevation ranges from 245 to 3495 feet (75 to 1065 meters). Blooms Feb-Jun.                                                            | <b>Moderate Potential.</b> Potentially suitable volcanic and serpentine substrate in Sargent cypress forest and chaparral habitats exist within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Calistoga ceanothus<br><i>Ceanothus divergens</i>                       | Rank 1B.2                        | Chaparral (serpentine or volcanic, rocky). Elevation ranges from 555 to 3115 feet (170 to 950 meters). Blooms Feb-Apr.                                                                                | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on rocky volcanic and serpentine substrates exists within the Phase 2/Open Space Study Area, and the species is known from the region.                             | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                             | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                   | Potential for Occurrence <sup>2</sup>                                                                                                                                                                       | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| holly-leaved ceanothus<br><i>Ceanothus purpureus</i>                | Rank 1B.2                        | Chaparral, cismontane woodland. Elevation ranges from 390 to 2100 feet (120 to 640 meters). Blooms Feb-Jun.                                                                                               | <b>Moderate Potential.</b> Potentially suitable chaparral and oak woodland edge habitats on rocky volcanic slopes exist within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Sonoma ceanothus<br><i>Ceanothus sonomensis</i>                     | Rank 1B.2                        | Chaparral (sandy, serpentine or volcanic). Elevation ranges from 705 to 2625 feet (215 to 800 meters). Blooms Feb-Apr.                                                                                    | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on volcanic substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| pappose tarplant<br><i>Centromadia parryi</i> ssp. <i>parryi</i>    | Rank 1B.2                        | Chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic). Elevation ranges from 0 to 1380 feet (0 to 420 meters). Blooms May-Nov. | <b>Unlikely.</b> This species is known from alkaline substrate, which is not present within the Phase 2/Open Space Study Area.                                                                              | No further actions are recommended for this species.                                                                                                                                                                                              |
| dwarf soaproot<br><i>Chlorogalum pomeridianum</i> var. <i>minus</i> | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 1000 to 3280 feet (305 to 1000 meters). Blooms May-Aug.                                                                                                     | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                        | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                            | Conservation Status <sup>1</sup> | Habitat                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                            | Recommendations                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brewer's clarkia<br><i>Clarkia breweri</i>                         | Rank 4.2                         | Chaparral, cismontane woodland, coastal scrub. Elevation ranges from 705 to 3660 feet (215 to 1115 meters). Blooms Apr-Jun.                 | <b>Moderate Potential.</b> Potentially suitable chaparral and oak woodland habitats on serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.           | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Tracy's clarkia<br><i>Clarkia gracilis ssp. tracyi</i>             | Rank 4.2                         | Chaparral (openings, usually serpentine). Elevation ranges from 210 to 2135 feet (65 to 650 meters). Blooms Apr-Jul.                        | <b>Present.</b> This species was observed in several locations within the Phase 1 Phase 2/Open Space Study Area in chaparral habitat on serpentine substrate.                                                    | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| serpentine collomia<br><i>Collomia diversifolia</i>                | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 655 to 1970 feet (200 to 600 meters). Blooms May-Jun.                                 | <b>Present.</b> This species was observed in several locations within the Phase 2/Open Space Study Area in chaparral habitat on serpentine substrate.                                                            | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| serpentine bird's-beak<br><i>Cordylanthus tenuis ssp. brunneus</i> | Rank 4.3                         | Closed-cone coniferous forest, chaparral, cismontane woodland. Elevation ranges from 1000 to 3000 feet (305 to 915 meters). Blooms Jul-Aug. | <b>Present.</b> This species was observed south of Butts Canyon Road within the Phase 1 Phase 2/Open Space Study Area on steep, rocky, serpentine substrate in leather oak chaparral and foothill pine woodland. | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| serpentine cryptantha<br><i>Cryptantha dissita</i>                 | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 1295 to 1905 feet (395 to 580 meters). Blooms Apr-Jun.                                        | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences.                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                      | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                        | Recommendations                                                                                                                                                                                                                                   |
|--------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| deep-scarred cryptantha<br><i>Cryptantha excavata</i>  | Rank 1B.1                        | Cismontane woodland (sandy or gravelly). Elevation ranges from 325 to 1640 feet (100 to 500 meters). Blooms Apr-May.                                                                         | <b>Moderate Potential.</b> Potentially suitable sandy, gravelly, dry streambank habitat is present within the Phase 2/Open Space Study Area, and the species is known from the region.                                       | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| red-stemmed cryptantha<br><i>Cryptantha rostellata</i> | Rank 4.2                         | Cismontane woodland, valley and foothill grassland. Elevation ranges from 130 to 2625 feet (40 to 800 meters). Blooms Apr-Jun.                                                               | <b>Moderate Potential.</b> Potentially suitable open, rocky, dry sites in grassland, chaparral, and oak and pine woodland habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| mountain lady's-slipper<br><i>Cypripedium montanum</i> | Rank 4.2                         | Broadleaved upland forest, cismontane woodland, lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 605 to 7300 feet (185 to 2225 meters). Blooms Mar-Aug. | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable habitat for this species which prefers cooler/mesic coniferous forest with partial to closed canopy, often near streams and wetlands.          | No further actions are recommended for this species.                                                                                                                                                                                              |
| swamp larkspur<br><i>Delphinium uliginosum</i>         | Rank 4.2                         | Chaparral, valley and foothill grassland. Elevation ranges from 1115 to 2000 feet (340 to 610 meters). Blooms May-Jun.                                                                       | <b>Present.</b> This species has been observed in numerous locations within the Phase 2/Open Space Study Area in seeps, wet meadows, and along streams on serpentine substrate.                                              | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Cascade downingia<br><i>Downingia willamettensis</i>   | Rank 2B.2                        | Cismontane woodland (lake margins), valley and foothill grassland (lake margins), vernal pools. Elevation ranges from 45 to 3640 feet (15 to 1110 meters). Blooms Jun-Jul(Sep).              | <b>Moderate Potential.</b> Potentially suitable lake margin habitat is present within the Phase 2/Open Space Study Area, and the species is known from the region.                                                           | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                 | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                   | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                      | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| marsh horsetail<br><i>Equisetum palustre</i>            | Rank 3                           | Marshes and swamps. Elevation ranges from 145 to 3280 feet (45 to 1000 meters). Blooms unk.                                                               | <b>Unlikely.</b> The nearest known occurrences are in the immediate San Francisco Bay area; occurrences in Lake County are dubious (documented from a second source, not based on voucher specimen or direct observation). | No further actions are recommended for this species.                                                                                                                                                                                              |
| Brandegee's eriastrum<br><i>Eriastrum brandegeae</i>    | Rank 1B.1                        | Chaparral, cismontane woodland. Elevation ranges from 1390 to 2755 feet (425 to 840 meters). Blooms Apr-Aug.                                              | <b>Moderate Potential.</b> Potentially suitable barren, volcanic substrate is present within the Phase 2/Open Space Study Area, and the species is known from the region.                                                  | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| streamside daisy<br><i>Erigeron biolettii</i>           | Rank 3                           | Broadleaved upland forest, cismontane woodland, north coast coniferous forest. Elevation ranges from 95 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct. | <b>Moderate Potential.</b> Potentially suitable rocky volcanic and serpentine substrates exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                         | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Greene's narrow-leaved daisy<br><i>Erigeron greenei</i> | Rank 1B.2                        | Chaparral (serpentine or volcanic). Elevation ranges from 260 to 3295 feet (80 to 1005 meters). Blooms May-Sep.                                           | <b>Present.</b> This species was observed in numerous locations within the Phase 2/Open Space Study Area in rocky, chaparral habitat, usually on serpentine substrate.                                                     | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Snow Mountain buckwheat<br><i>Eriogonum nervulosum</i>  | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 980 to 6905 feet (300 to 2105 meters). Blooms Jun-Sep.                                                      | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on rocky, serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                       | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                         | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| bay buckwheat<br><i>Eriogonum umbellatum</i><br><i>var. bahiiforme</i> | Rank 4.2                         | Cismontane woodland, lower montane coniferous forest. Elevation ranges from 2295 to 7220 feet (700 to 2200 meters). Blooms Jul-Sep.                                           | <b>Moderate Potential.</b> Potentially suitable chaparral and oak and foothill pine woodland habitats on rocky, serpentine and volcanic substrates exists within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Loch Lomond button-celery<br><i>Eryngium constancei</i>                | FE, SE, Rank 1B.1                | Vernal pools. Elevation ranges from 1505 to 2805 feet (460 to 855 meters). Blooms Apr-Jun.                                                                                    | <b>Moderate Potential.</b> Potentially suitable vernal wetland habitat exists within the Phase 2/Open Space Study Area at waterbodies such as Wildcat Lake, and the species is known from the region.                                         | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Jepson's coyote thistle<br><i>Eryngium jepsonii</i>                    | Rank 1B.2                        | Valley and foothill grassland, vernal pools. Elevation ranges from 5 to 985 feet (3 to 300 meters). Blooms Apr-Aug.                                                           | <b>Moderate Potential.</b> Potentially suitable seasonal wetlands on clay substrate are present within the Phase 2/Open Space Study Area.                                                                                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| bare monkeyflower<br><i>Erythranthe nudata</i>                         | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 655 to 2295 feet (200 to 700 meters). Blooms May-Jun.                                                                   | <b>Present.</b> This species has been observed in numerous locations within the Phase 2/Open Space Study Area in mesic areas, seeps, and along streams on serpentine substrate.                                                               | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| St. Helena fawn lily<br><i>Erythronium helenae</i>                     | Rank 4.2                         | Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 1145 to 4005 feet (350 to 1220 meters). Blooms Mar-May. | <b>Present.</b> This species has been observed in multiple locations within the Phase 2/Open Space Study Area on north-facing slopes in rocky, chaparral habitat on serpentine substrate.                                                     | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |



| Species                                                 | Conservation Status <sup>1</sup> | Habitat                                                                                                                                           | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                           | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| San Joaquin spearscale<br><i>Extriplex joaquinana</i>   | Rank 1B.2                        | Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Elevation ranges from 0 to 2740 feet (1 to 835 meters). Blooms Apr-Oct. | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable alkaline habitat for this species.                                                                                                                                                                | No further actions are recommended for this species.                                                                                                                                                                                              |
| adobe-lily<br><i>Fritillaria pluriflora</i>             | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 195 to 2315 feet (60 to 705 meters). Blooms Feb-Apr.         | <b>Moderate Potential.</b> Potentially suitable heavy soils in chaparral and grassland habitats exists within the Phase 2/Open Space Study Area, and several occurrences of this species have been documented surrounding and within the larger Guenoc Ranch property.          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Purdy's fritillary<br><i>Fritillaria purdyi</i>         | Rank 4.3                         | Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 570 to 7400 feet (175 to 2255 meters). Blooms Mar-Jun.     | <b>Present.</b> This species has been documented in multiple locations within the Phase 2/Open Space Study Area on rocky, serpentine substrate in chaparral and foothill pine woodland habitats, and similar habitat exists elsewhere within the Phase 2/Open Space Study Area. | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Boggs Lake hedge-hyssop<br><i>Gratiola heterosepala</i> | SE, Rank 1B.2                    | Marshes and swamps (lake margins), vernal pools. Elevation ranges from 30 to 7790 feet (10 to 2375 meters). Blooms Apr-Aug.                       | <b>Moderate Potential.</b> Potentially suitable habitat exists along and within Wildcat Lake and Blacktail Lake.                                                                                                                                                                | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                              | Conservation Status <sup>1</sup> | Habitat                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                  | Recommendations                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hall's harmonia<br><i>Harmonia hallii</i>                                            | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 1000 to 3200 feet (305 to 975 meters). Blooms Apr-Jun.                                        | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on rocky, serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences.                    | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| nodding harmonia<br><i>Harmonia nutans</i>                                           | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 245 to 3200 feet (75 to 975 meters). Blooms Mar-May.                                  | <b>Moderate Potential.</b> Potentially suitable chaparral and foothill pine woodland habitats on rocky, volcanic substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.  | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| serpentine sunflower<br><i>Helianthus exilis</i>                                     | Rank 4.2                         | Chaparral, cismontane woodland. Elevation ranges from 490 to 5005 feet (150 to 1525 meters). Blooms Jun-Nov.                                | <b>Present.</b> This species has been observed in numerous locations within the Phase 2/Open Space Study Area on serpentine substrate in seasonally wet areas on such as seeps, meadows, and along streams.            | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| congested-headed hayfield tarplant<br><i>Hemizonia congesta</i> ssp. <i>congesta</i> | Rank 1B.2                        | Valley and foothill grassland. Elevation ranges from 65 to 1835 feet (20 to 560 meters). Blooms Apr-Nov.                                    | <b>Moderate Potential.</b> Potentially suitable grassland habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                           | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| glandular western flax<br><i>Hesperolinon adenophyllum</i>                           | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 490 to 4315 feet (150 to 1315 meters). Blooms May-Aug. | <b>Moderate Potential.</b> Potentially suitable chaparral and foothill pine woodland habitat on rocky, serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                          | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                    | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                             | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| two-carpellate western flax<br><i>Hesperolinon bicarpellatum</i> | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 195 to 3295 feet (60 to 1005 meters). Blooms May-Jul.                                                                        | <b>Present.</b> This species has been observed in multiple locations within the Phase 2/Open Space Study Area in chaparral, foothill pine woodland, and Sargent cypress woodland habitats on rocky serpentine and volcanic substrates.            | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Lake County western flax<br><i>Hesperolinon didymocarpum</i>     | SE, Rank 1B.2                    | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 1080 to 1200 feet (330 to 365 meters). Blooms May-Jul.                                | <b>Present.</b> This species has been observed in multiple locations in the central and southern portions of the Phase 2/Open Space Study Area in chaparral habitat on rocky, serpentine substrate.                                               | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| drymaria-like western flax<br><i>Hesperolinon drymarioides</i>   | Rank 1B.2                        | Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 325 to 3705 feet (100 to 1130 meters). Blooms May-Aug. | <b>Moderate Potential.</b> Potentially suitable chaparral, foothill pine woodland, and Sargent cypress woodland habitats on rocky, serpentine substrate exist within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Sharsmith's western flax<br><i>Hesperolinon sharsmithiae</i>     | Rank 1B.2                        | Chaparral. Elevation ranges from 885 to 985 feet (270 to 300 meters). Blooms May-Jul.                                                                                      | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from nearby occurrences.                                                      | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                          | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                        | Recommendations                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bolander's horkelia<br><i>Horkelia bolanderi</i>           | Rank 1B.2                        | Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Elevation ranges from 1475 to 3610 feet (450 to 1100 meters). Blooms (May)Jun-Aug. | <b>Moderate Potential.</b> Potentially suitable habitat exists within the Phase 2/Open Space Study Area and the species is known from the region.                                                                                                                                                                                                            | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3.                                                                                               |
| California satintail<br><i>Imperata brevifolia</i>         | Rank 2B.1                        | Chaparral, coastal scrub, mojavean desert scrub, meadows and seeps (often alkali), riparian scrub. Elevation ranges from 0 to 3985 feet (0 to 1215 meters). Blooms Sep-May.      | <b>Unlikely.</b> This species is only known in the region from a single, historic (1928) occurrence located approximately 11 miles northwest of the Phase 2/Open Space Study Area. The native status of the single plant observed is also in doubt. In addition, the Phase 2/Open Space Study Area lacks alkaline substrate.                                 | No further actions are recommended for this species.                                                                                                                                                                                                                                                                                            |
| Northern California black walnut<br><i>Juglans hindsii</i> | Rank 1B.1 <sup>3</sup>           | Riparian forest, riparian woodland. Elevation ranges from 0 to 1445 feet (0 to 440 meters). Blooms Apr-May.                                                                      | <b>Present.</b> This species was observed in low numbers associated with old home sites, barns, and similar sites across the Phase 2/Open Space Study Area. Occurrences of this species within the Phase 2/Open Space Study Area have been planted or are offspring of planted individuals and should not be considered special-status (Potter et al. 2018). | Although this species was observed within multiple locations across the Phase 1 Study Area, it is associated with old home sites, barns, and similar areas and represents planted specimens that should not be considered special-status and is therefore not addressed in this report. No additional actions are recommended for this species. |
| Santa Lucia dwarf rush<br><i>Juncus luciensis</i>          | Rank 1B.2                        | Chaparral, great basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Elevation ranges from 980 to 6695 feet (300 to 2040 meters). Blooms Apr-Jul.     | <b>Moderate Potential.</b> Potentially suitable wetland habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                                                                                                                                   | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3.                                                                                               |



| Species                                               | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                      | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                          | Recommendations                                                                                                                                                                                                                                   |
|-------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burke's goldfields<br><i>Lasthenia burkei</i>         | FE, SE, Rank 1B.1                | Meadows and seeps (mesic), vernal pools. Elevation ranges from 45 to 1970 feet (15 to 600 meters). Blooms Apr-Jun.                                           | <b>Moderate Potential.</b> Potentially suitable vernal wetland habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                              | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Contra Costa goldfields<br><i>Lasthenia conjugens</i> | FE, Rank 1B.1                    | Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun. | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable alkaline habitat required for this species.                                                                                                                      | No further actions are recommended for this species.                                                                                                                                                                                              |
| Colusa layia<br><i>Layia septentrionalis</i>          | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 325 to 3595 feet (100 to 1095 meters). Blooms Apr-May.                  | <b>Present.</b> This species was observed within the Phase 2/Open Space Study Area, always in association with blue oak woodland.                                                                                                              | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| legenere<br><i>Legenere limosa</i>                    | Rank 1B.1                        | Vernal pools. Elevation ranges from 0 to 2885 feet (1 to 880 meters). Blooms Apr-Jun.                                                                        | <b>Moderate Potential.</b> Potentially suitable vernal wetland habitat exists within the Phase 2/Open Space Study Area in along and within Wildcat Lake and Blacktail Lake, and the species is known from the region.                          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| bristly leptosiphon<br><i>Leptosiphon acicularis</i>  | Rank 4.2                         | Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.  | <b>Moderate Potential.</b> Potentially suitable grassland and grassy openings in oak woodland, foothill pine woodland, scrub, and chaparral habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                  | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                             | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                 | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jepson's leptosiphon<br><i>Leptosiphon jepsonii</i>      | Rank 1B.2                        | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 325 to 1640 feet (100 to 500 meters). Blooms Mar-May.                                          | <b>Moderate Potential.</b> Potentially suitable grassland and grassy openings in chaparral, oak woodland, and foothill pine woodland on volcanic and serpentine substrates exists within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| broad-lobed leptosiphon<br><i>Leptosiphon latisectus</i> | Rank 4.3                         | Broadleaved upland forest, cismontane woodland. Elevation ranges from 555 to 4920 feet (170 to 1500 meters). Blooms Apr-Jun.                                                        | <b>Moderate Potential.</b> Potentially suitable grassland and grassy openings in woodland exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                   | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| woolly-headed lessingia<br><i>Lessingia hololeuca</i>    | Rank 3                           | Broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 45 to 1000 feet (15 to 305 meters). Blooms Jun-Oct. | <b>Moderate Potential.</b> Potentially suitable clay and serpentine substrate exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                              | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Bolander's lily<br><i>Lilium bolanderi</i>               | Rank 4.2                         | Chaparral, lower montane coniferous forest. Elevation ranges from 95 to 5250 feet (30 to 1600 meters). Blooms Jun-Jul.                                                              | <b>Unlikely.</b> Although potentially suitable open, clay, serpentine substrate is present, the bulk of known occurrences of this plant are located in Del Norte, Humboldt, and Siskiyou counties.                                                                    | No further actions are recommended for this species.                                                                                                                                                                                              |



| Species                                                       | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| redwood lily<br><i>Lilium rubescens</i>                       | Rank 4.2                         | Broadleaved upland forest, chaparral, lower montane coniferous forest, north coast coniferous forest, upper montane coniferous forest. Elevation ranges from 95 to 6265 feet (30 to 1910 meters). Blooms Apr-Aug(Sep). | <b>Moderate Potential.</b> Potentially suitable chaparral habitat exists within the Phase 2/Open Space Study Area, and this species is known from the region.                                                                                                        | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| woolly meadowfoam<br><i>Limnanthes floccosa ssp. floccosa</i> | Rank 4.2                         | Chaparral, cismontane woodland, valley and foothill grassland, vernal pools. Elevation ranges from 195 to 4380 feet (60 to 1335 meters). Blooms Mar-May(Jun).                                                          | <b>Moderate Potential.</b> Potentially suitable vernal wet areas and pond/lake margins exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Sebastopol meadowfoam<br><i>Limnanthes vinculans</i>          | FE, SE, Rank 1B.1                | Meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 45 to 1000 feet (15 to 305 meters). Blooms Apr-May.                                                                              | <b>Moderate Potential.</b> Potentially suitable vernal wet areas in grassland and oak woodland exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                                                             | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Hoover's lomatium<br><i>Lomatium hooveri</i>                  | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 980 to 2905 feet (300 to 885 meters). Blooms Apr-Jul.                                                                                                            | <b>High Potential.</b> This species was observed in several locations within the Phase 1 Study Area in shady draws in blue oak woodland and in rocky chaparral habitat and has high potential to occur in similar habitats within the Phase 2/Open Space Study Area. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                              | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                  | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                  | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Napa lomatium<br><i>Lomatium repostum</i>            | Rank 4.3                         | Chaparral, cismontane woodland. Elevation ranges from 295 to 2725 feet (90 to 830 meters). Blooms Mar-Jun.                                                               | <b>Moderate Potential.</b> Potentially suitable rocky, volcanic and serpentine substrate in chaparral, foothill pine woodland and Sargent cypress woodland exist within the Phase 2/Open Space Study Area, and the species is known from the region.   | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Cobb Mountain lupine<br><i>Lupinus sericatus</i>     | Rank 1B.2                        | Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 900 to 5005 feet (275 to 1525 meters). Blooms Mar-Jun. | <b>Moderate Potential.</b> Potentially suitable gravelly substrate in chaparral, foothill pine woodland, Sargent cypress woodland, and oak woodland habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Heller's bush-mallow<br><i>Malacothamnus helleri</i> | Rank 3.3                         | Chaparral (sandstone), riparian woodland (gravel). Elevation ranges from 1000 to 2085 feet (305 to 635 meters). Blooms May-Jul.                                          | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on sandstone substrate and gravelly riparian habitat exists within the Phase 2/Open Space Study Area, and this species is known from the region.                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Mt. Diablo cottonweed<br><i>Micropus amphibolus</i>  | Rank 3.2                         | Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 145 to 2705 feet (45 to 825 meters). Blooms Mar-May.     | <b>Moderate Potential.</b> Potentially suitable sparsely vegetated oak woodland, foothill pine woodland, chaparral, scrub, and grassland habitats exist within the Phase 2/Open Space Study Area, and the species is known from the region.            | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                               | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                 | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                      | Recommendations                                                                                                                                                                                                                                   |
|-------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| marsh microseris<br><i>Microseris paludosa</i>        | Rank 1B.2                        | Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 1165 feet (5 to 355 meters). Blooms Apr-Jun(Jul).                         | <b>Moderate Potential.</b> Potentially suitable grassland and openings in oak woodland, foothill pine woodland, chaparral, and scrub on fine-textured substrate exist within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| sylvan microseris<br><i>Microseris sylvatica</i>      | Rank 4.2                         | Chaparral, cismontane woodland, great basin scrub, pinyon and juniper woodland, valley and foothill grassland (serpentine). Elevation ranges from 145 to 4920 feet (45 to 1500 meters). Blooms Mar-Jun. | <b>Moderate Potential.</b> Potentially suitable grassland and grassy openings in oak and foothill pine woodlands exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                                | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| green monardella<br><i>Monardella viridis</i>         | Rank 4.3                         | Broadleaved upland forest, chaparral, cismontane woodland. Elevation ranges from 325 to 3315 feet (100 to 1010 meters). Blooms Jun-Sep.                                                                 | <b>Present.</b> This species was observed within the Phase 2/Open Space Study Area in rocky, chaparral habitat on serpentine and volcanic substrates.                                                                                                      | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| little mousetail<br><i>Myosurus minimus ssp. apus</i> | Rank 3.1                         | Valley and foothill grassland, vernal pools (alkaline). Elevation ranges from 65 to 2100 feet (20 to 640 meters). Blooms Mar-Jun.                                                                       | <b>Unlikely.</b> Alkaline soils are not present within the Phase 2/Open Space Study Area.                                                                                                                                                                  | No further actions are recommended for this species.                                                                                                                                                                                              |
| cotula navarretia<br><i>Navarretia cotulifolia</i>    | Rank 4.2                         | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 10 to 6005 feet (4 to 1830 meters). Blooms May-Jun.                                                                | <b>Present.</b> This species was observed in abundance in the western portion of the Phase 2/Open Space Study Area on heavy, serpentine soils in mesic grassland.                                                                                          | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |

| Species                                                                          | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                         | Potential for Occurrence <sup>2</sup>                                                                                                                                          | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jepson's navarretia<br><i>Navarretia jepsonii</i>                                | Rank 4.3                         | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 570 to 2805 feet (175 to 855 meters). Blooms Apr-Jun.                                                      | <b>Present.</b> This species was observed within the Phase 2/Open Space Study Area in grassland or grassy openings in chaparral habitat on clay soils.                         | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Baker's navarretia<br><i>Navarretia leucocephala</i> ssp. <i>bakeri</i>          | Rank 1B.1                        | Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 15 to 5710 feet (5 to 1740 meters). Blooms Apr-Jul. | <b>Moderate Potential.</b> Potentially suitable vernal wetlands on clay soils are present within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| few-flowered navarretia<br><i>Navarretia leucocephala</i> ssp. <i>pauciflora</i> | FE, ST, Rank 1B.1                | Vernal pools (volcanic ash flow). Elevation ranges from 1310 to 2805 feet (400 to 855 meters). Blooms May-Jun.                                                                                  | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable vernal pool habitat with volcanic ash flow substrate required for this species.                  | No further actions are recommended for this species.                                                                                                                                                                                              |
| many-flowered navarretia<br><i>Navarretia leucocephala</i> ssp. <i>plieantha</i> | FE, SE, Rank 1B.2                | Vernal pools (volcanic ash flow). Elevation ranges from 95 to 3115 feet (30 to 950 meters). Blooms May-Jun.                                                                                     | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks potentially suitable vernal pool habitat with volcanic ash flow substrate required for this species.                  | No further actions are recommended for this species.                                                                                                                                                                                              |
| small pincushion navarretia<br><i>Navarretia myersii</i> ssp. <i>deminuta</i>    | Rank 1B.1                        | Vernal pools (clay loam). Elevation ranges from 1160 to 1165 feet (355 to 355 meters). Blooms Apr-May.                                                                                          | <b>Moderate Potential.</b> Potentially suitable vernal wetland habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.              | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                                       | Conservation Status <sup>1</sup> | Habitat                                                                                                                                          | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                        | Recommendations                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| adobe navarretia<br><i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i> | Rank 4.2                         | Valley and foothill grassland vernal mesic, vernal pools sometimes. Elevation ranges from 325 to 3280 feet (100 to 1000 meters). Blooms Apr-Jun. | <b>Moderate Potential.</b> Potentially suitable, vernal mesic clay substrate in grassland habitat exists within the Phase 2/Open Space Study Area, and the species is known from the region.                                 | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Porter's navarretia<br><i>Navarretia paradoxinota</i>                         | Rank 1B.3                        | Meadows and seeps. Elevation ranges from 540 to 2755 feet (165 to 840 meters). Blooms May-Jun(Jul).                                              | <b>Moderate Potential.</b> Potentially suitable, vernal mesic openings on serpentine substrate exist within the Phase 2/Open Space Study Area, and the species is known from the region.                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Marin County navarretia<br><i>Navarretia rosulata</i>                         | Rank 1B.2                        | Closed-cone coniferous forest, chaparral. Elevation ranges from 655 to 2085 feet (200 to 635 meters). Blooms May-Jul.                            | <b>Moderate Potential.</b> Potentially suitable, dry, rocky substrate in Sargent cypress woodland, chaparral, and scrub habitats exists within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| slender Orcutt grass<br><i>Orcuttia tenuis</i>                                | FT, SE, Rank 1B.1                | Vernal pools. Elevation ranges from 110 to 5775 feet (35 to 1760 meters). Blooms May-Sep(Oct).                                                   | <b>Moderate Potential.</b> Potentially suitable vernal wetland habitat exists within the Phase 2/Open Space Study Area in Blacktail Lake, and the species is known from the region.                                          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Howell's broomrape<br><i>Orobanche valida</i> ssp. <i>howellii</i>            | Rank 4.3                         | Chaparral (serpentine or volcanic). Elevation ranges from 590 to 5710 feet (180 to 1740 meters). Blooms Jun-Sep.                                 | <b>Moderate Potential.</b> Potentially suitable chaparral habitat in rocky, volcanic and serpentine substrates exists within the Phase 2/Open Space Study Area, and the species is known from the region.                    | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                          | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                               | Recommendations                                                                                                                                                                                                                                   |
|------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Geysers panicum<br><i>Panicum acuminatum var. thermale</i>       | SE, Rank 1B.2                    | Closed-cone coniferous forest, riparian forest, valley and foothill grassland. Elevation ranges from 1000 to 8105 feet (305 to 2470 meters). Blooms Jun-Aug.                                                | <b>Unlikely.</b> This species is associated with hot springs, and such habitat is not present within the Phase 2/Open Space Study Area. The nearest occurrence of this species is approximately 10 miles west of the Phase 2/Open Space Study Area. | No further actions are recommended for this species.                                                                                                                                                                                              |
| Sonoma beardtongue<br><i>Penstemon newberryi var. sonomensis</i> | Rank 1B.3                        | Chaparral (rocky). Elevation ranges from 2295 to 4495 feet (700 to 1370 meters). Blooms Apr-Aug.                                                                                                            | <b>Moderate Potential.</b> Potentially suitable rock outcrops in chaparral habitat exist within the Phase 2/Open Space Study Area, and this species is known from the region.                                                                       | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Michael's rein orchid<br><i>Piperia michaelii</i>                | Rank 4.2                         | Coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest. Elevation ranges from 5 to 3000 feet (3 to 915 meters). Blooms Apr-Aug. | <b>Unlikely.</b> This species is typically associated with substrates comprised of mudstone and humus, which are not present within the Phase 2/Open Space Study Area.                                                                              | No further actions are recommended for this species.                                                                                                                                                                                              |
| bearded popcornflower<br><i>Plagiobothrys hystriculus</i>        | Rank 1B.1                        | Valley and foothill grassland (mesic), vernal pools margins. Elevation ranges from 0 to 900 feet (0 to 274 meters). Blooms Apr-May.                                                                         | <b>Moderate Potential.</b> Potentially suitable vernal mesic areas in grassland habitat are present within the Phase 2/Open Space Study Area, and this species is known from the region.                                                            | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                  | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                    | Potential for Occurrence <sup>2</sup>                                                                                                                                      | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Calistoga popcornflower<br><i>Plagiobothrys strictus</i> | FE, ST, Rank 1B.1                | Meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 295 to 525 feet (90 to 160 meters). Blooms Mar-Jun.                                  | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks alkaline sites suitable for this species.                                                                         | No further actions are recommended for this species.                                                                                                                                                                                              |
| Napa blue grass<br><i>Poa napensis</i>                   | FE, SE, Rank 1B.1                | Meadows and seeps, valley and foothill grassland. Elevation ranges from 325 to 655 feet (100 to 200 meters). Blooms May-Aug.                                               | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks alkaline sites suitable for this species.                                                                         | No further actions are recommended for this species.                                                                                                                                                                                              |
| eel-grass pondweed<br><i>Potamogeton zosteriformis</i>   | Rank 2B.2                        | Marshes and swamps (assorted freshwater). Elevation ranges from 0 to 6100 feet (0 to 1860 meters). Blooms Jun-Jul.                                                         | <b>Moderate Potential.</b> Potentially suitable lake and reservoir habitats are present within the Phase 2/Open Space Study Area and the species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| California alkali grass<br><i>Puccinellia simplex</i>    | Rank 1B.2                        | Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 5 to 3050 feet (2 to 930 meters). Blooms Mar-May.                    | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks alkaline sites suitable for this species.                                                                         | No further actions are recommended for this species.                                                                                                                                                                                              |
| Lobb's aquatic buttercup<br><i>Ranunculus lobbii</i>     | Rank 4.2                         | Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 45 to 1540 feet (15 to 470 meters). Blooms Feb-May. | <b>Moderate Potential.</b> Potentially suitable seasonally ponded sites exist within the Phase 2/Open Space Study Area                                                     | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                   | Conservation Status <sup>1</sup> | Habitat                                                                                                                                        | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                       | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lake County stonecrop<br><i>Sedella leiocarpa</i>                         | FE, SE, Rank 1B.1                | Cismontane woodland, valley and foothill grassland, vernal pools. Elevation ranges from 1195 to 2590 feet (365 to 790 meters). Blooms Apr-May. | <b>Moderate Potential.</b> Potentially suitable vernal wet areas in oak woodland and grassland habitats and volcanic substrate exist within the Phase 2/Open Space Study Area.                                              | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Cleveland's ragwort<br><i>Senecio clevelandii</i> var. <i>clevelandii</i> | Rank 4.3                         | Chaparral (serpentine seeps). Elevation ranges from 1195 to 2955 feet (365 to 900 meters). Blooms Jun-Jul.                                     | <b>Present.</b> This species was observed within the Phase 1 Phase 2/Open Space Study Area south of Butts Canyon Road on serpentine substrate in and adjacent to intermittent and perennial streams and in wetland meadows. | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Napa checkerbloom<br><i>Sidalcea hickmanii</i> ssp. <i>napensis</i>       | Rank 1B.1                        | Chaparral. Elevation ranges from 1360 to 2000 feet (415 to 610 meters). Blooms Apr-Jun.                                                        | <b>Moderate Potential.</b> Potentially suitable chaparral habitat on rhyolitic substrates exists within the Phase 2/Open Space Study Area, and this species is known from the region.                                       | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Keck's checkerbloom<br><i>Sidalcea keckii</i>                             | FE, Rank 1B.1                    | Cismontane woodland, valley and foothill grassland. Elevation ranges from 245 to 2135 feet (75 to 650 meters). Blooms Apr-May(Jun).            | <b>Present.</b> This species was observed in a single location within the Phase 2/Open Space Study Area on serpentine clay soils.                                                                                           | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| marsh checkerbloom<br><i>Sidalcea oregana</i> ssp. <i>hydrophila</i>      | Rank 1B.2                        | Meadows and seeps, riparian forest. Elevation ranges from 3605 to 7545 feet (1100 to 2300 meters). Blooms (Jun)Jul-Aug.                        | <b>Moderate Potential.</b> Potentially suitable streambank and wetland meadow habitat exists within the Phase 2/Open Space Study Area, and this species is known from the region.                                           | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                     | Conservation Status <sup>1</sup> | Habitat                                                                                                                 | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                       | Recommendations                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kenwood Marsh checkerbloom<br><i>Sidalcea oregana ssp. valida</i>           | FE, SE, Rank 1B.1                | Marshes and swamps (freshwater). Elevation ranges from 375 to 490 feet (115 to 150 meters). Blooms Jun-Sep.             | <b>Unlikely.</b> This species is highly restricted to two known locations, the nearest of which is approximately 12 miles southwest of the Phase 2/Open Space Study Area.                                                                   | No further actions are recommended for this species.                                                                                                                                                                                              |
| long-styled sand-spurrey<br><i>Spergularia macrotheca var. longistyla</i>   | Rank 1B.2                        | Meadows and seeps, marshes and swamps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May.           | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks alkaline sites suitable for this species.                                                                                                                                          | No further actions are recommended for this species.                                                                                                                                                                                              |
| Tamalpais jewelflower<br><i>Streptanthus batrachopus</i>                    | Rank 1B.3                        | Closed-cone coniferous forest, chaparral. Elevation ranges from 1000 to 2135 feet (305 to 650 meters). Blooms Apr-Jul.  | <b>Unlikely.</b> Potentially suitable habitat but the Phase 2/Open Space Study Area is greatly removed from the nearest known occurrence of this species, which is highly restricted to the vicinity of Mt. Tamalpais in Marin County.      | No further actions are recommended for this species.                                                                                                                                                                                              |
| Socrates Mine jewelflower<br><i>Streptanthus brachiatus ssp. brachiatus</i> | Rank 1B.2                        | Closed-cone coniferous forest, chaparral. Elevation ranges from 1785 to 3280 feet (545 to 1000 meters). Blooms May-Jun. | <b>Moderate Potential.</b> Potentially suitable Sargent cypress woodland, foothill pine woodland, and chaparral habitats on serpentine substrate exist within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| Freed's jewelflower<br><i>Streptanthus brachiatus ssp. hoffmanii</i>        | Rank 1B.2                        | Chaparral, cismontane woodland. Elevation ranges from 1605 to 4005 feet (490 to 1220 meters). Blooms May-Jul.           | <b>Moderate Potential.</b> Potentially suitable Sargent cypress woodland, foothill pine woodland, and chaparral habitats on serpentine substrate exist within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |



| Species                                                                             | Conservation Status <sup>1</sup> | Habitat                                                                                                                | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                       | Recommendations                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| green jewelflower<br><i>Streptanthus hesperidis</i>                                 | Rank 1B.2                        | Chaparral (openings), cismontane woodland. Elevation ranges from 425 to 2495 feet (130 to 760 meters). Blooms May-Jul. | <b>Present.</b> This species was observed at numerous locations in the Phase 2/Open Space Study Area in chaparral and foothill pine woodland habitats on rocky, serpentine substrates.                                                                                                                                      | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Three Peaks jewelflower<br><i>Streptanthus morrisonii</i> ssp. <i>elatus</i>        | Rank 1B.2                        | Chaparral (serpentine). Elevation ranges from 295 to 2675 feet (90 to 815 meters). Blooms Jun-Sep.                     | <b>Present.</b> This species was observed in one location within the Phase 2/Open Space Study Area. The individuals observed were intermediate between ssp. <i>elatus</i> and ssp. <i>hirtiflorus</i> , and as a result, all were identified to the specific level only; however, both subspecies have a CNPS Rank of 1B.2. | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Kruckeberg's jewelflower<br><i>Streptanthus morrisonii</i> ssp. <i>kruckebergii</i> | Rank 1B.2                        | Cismontane woodland (serpentine). Elevation ranges from 705 to 3395 feet (215 to 1035 meters). Blooms Apr-Jul.         | <b>Moderate Potential.</b> Potentially suitable rocky, serpentine outcrops in Sargent cypress woodland, foothill pine woodland, and chaparral habitats exist within the Phase 2/Open Space Study Area, and this species is known from nearby occurrences.                                                                   | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| early jewelflower<br><i>Streptanthus vernalis</i>                                   | Rank 1B.2                        | Closed-cone coniferous forest, chaparral. Elevation ranges from 2000 to 2000 feet (610 to 610 meters). Blooms Mar-May. | <b>Moderate Potential.</b> Potentially suitable Sargent cypress woodland, foothill pine woodland, and chaparral habitats on serpentine substrate exist within the Phase 2/Open Space Study Area, and this species is known from nearby occurrences.                                                                         | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

| Species                                                                   | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                 | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                        | Recommendations                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| slender-leaved pondweed<br><i>Stuckenia filiformis</i> ssp. <i>alpina</i> | Rank 2B.2                        | Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7055 feet (300 to 2150 meters). Blooms May-Jul.                                                          | <b>Moderate Potential.</b> Potentially suitable pond and reservoir habitats exist within the Phase 2/Open Space Study Area, and this species is known from the region.                                                                                       | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| short-podded thelypodium<br><i>Thelypodium brachycarpum</i>               | Rank 4.2                         | Chaparral, lower montane coniferous forest, meadows and seeps. Elevation ranges from 2195 to 8400 feet (670 to 2560 meters). Blooms May-Aug.                                            | <b>Moderate Potential.</b> Potentially suitable chaparral, foothill pine woodland, and Sargent cypress woodland on serpentine substrates exist within the Phase 2/Open Space Study Area, and this species is known from the region.                          | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| marsh zigadenus<br><i>Toxicoscordion fontanum</i>                         | Rank 4.2                         | Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps. Elevation ranges from 45 to 3280 feet (15 to 1000 meters). Blooms Apr-Jul.      | <b>Present.</b> This species has been observed in numerous locations within the Phase 2/Open Space Study Area in seeps, wet meadows, and along streams on serpentine substrate.                                                                              | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| Napa bluecurls<br><i>Trichostema ruygtii</i>                              | Rank 1B.2                        | Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 95 to 2230 feet (30 to 680 meters). Blooms Jun-Oct. | <b>Moderate Potential.</b> Potentially suitable mesic areas on volcanic substrate in chaparral, blue oak woodland, foothill pine woodland, and grassland habitats exist within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |
| saline clover<br><i>Trifolium hydrophilum</i>                             | Rank 1B.2                        | Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun.                               | <b>Unlikely.</b> The Phase 2/Open Space Study Area lacks alkaline sites suitable for this species.                                                                                                                                                           | No further actions are recommended for this species.                                                                                                                                                                                              |

| Species                                            | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                           | Potential for Occurrence <sup>2</sup>                                                                                                                                                                         | Recommendations                                                                                                                                                                                                                                   |
|----------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dark-mouth triteleia<br><i>Triteleia lugens</i>    | Rank 4.3                         | Broadleaved upland forest, chaparral, coastal scrub, lower montane coniferous forest. Elevation ranges from 328 to 3280 feet (100 to 1000 meters). Blooms Apr-Jun | <b>Present.</b> This species was observed within the Phase 2/Open Space Study Area in low numbers in a limited number of areas south of Butts Canyon Road, on rocky, volcanic substrate.                      | This species was observed in one or more locations within the Phase 2/Open Space Study Area. Recommendations for this species can be found in Section 6.3.                                                                                        |
| oval-leaved viburnum<br><i>Viburnum ellipticum</i> | Rank 2B.3                        | Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 705 to 4595 feet (215 to 1400 meters). Blooms May-Jun.                     | <b>Moderate Potential.</b> Potentially suitable chaparral, foothill pine woodland, and oak woodland habitats are present within the Phase 2/Open Space Study Area, and this species is known from the region. | Although this species was not observed, it was determined to have potential to occur within the Phase 2/Open Space Study Area based on the habitats present and nearby occurrences. Recommendations for this species can be found in Section 6.3. |

<sup>1</sup>Key to Conservation Status:

|           |                                                                                                                                |
|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| FE        | Federal Endangered                                                                                                             |
| FT        | Federal Threatened                                                                                                             |
| SE        | State Endangered                                                                                                               |
| ST        | State Threatened                                                                                                               |
| 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 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 4.2  | 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)                               |



**<sup>2</sup>Key to Potential for Occurrence:**

**No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Present.** Species was observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

<sup>3</sup>Although this species is listed as Rank 1B.1, recent data suggests that this species should not be considered special-status (Potter et al. 2018)

## **APPENDIX E**

### **SPECIAL-STATUS PLANT SPECIES OBSERVED WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**





## **APPENDIX E1**

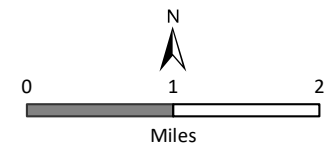
**FEDERAL, STATE, AND CNPS RANK 1 SPECIAL-STATUS PLANT SPECIES OBSERVED  
WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**



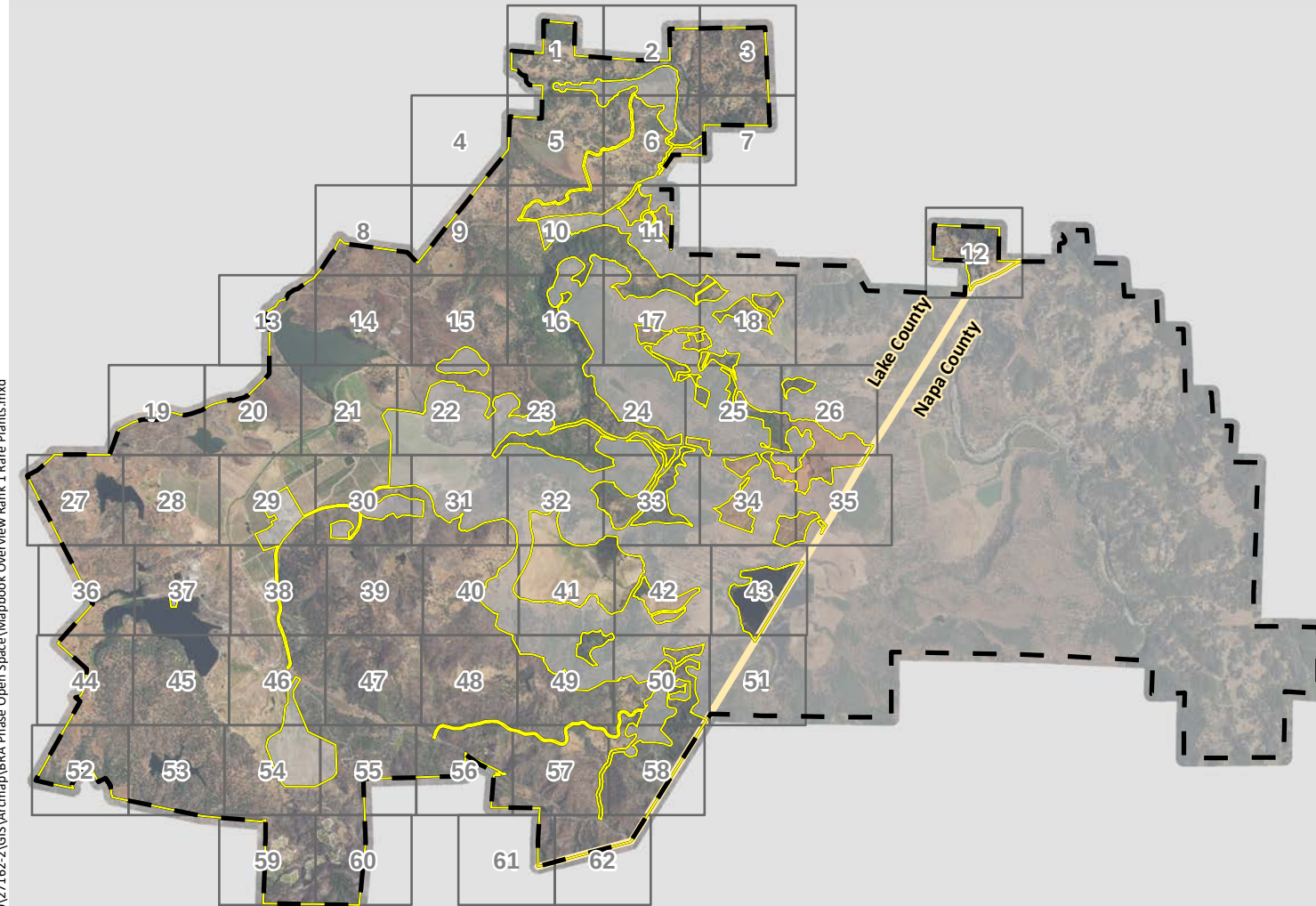
# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Overview)**

Maha Resort and Guenoc Valley  
 Development, Phase 2 and Open Space

-  Property Boundary
-  Phase 2 and Open Space Study Area
-  Mapbook Grid
-  County Boundary



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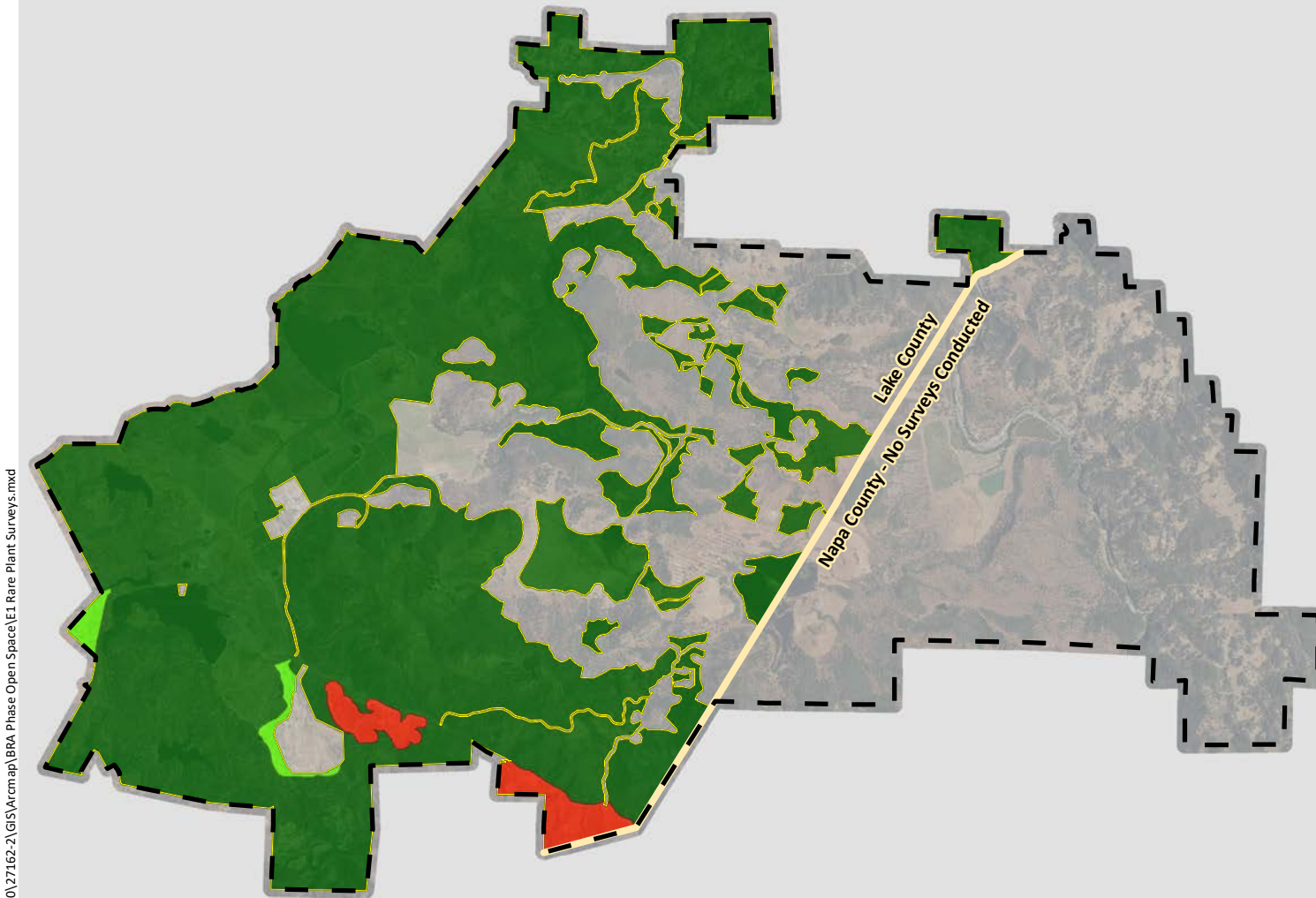


Sources: Hexagon 2016 Aerial, WRA | Prepared By: mrochelle, 6/28/2019

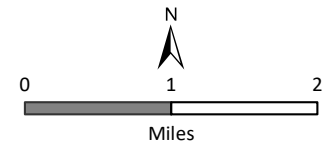


# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Special-Status Plant Surveys)**

Maha Resort and Guenoc Valley  
 Development, Phase 2 & Open Space



- Property Boundary
- County Boundary
- Phase 2 & Open Space Study Area
- Mid-Season Survey Only
- Late-Season Survey Only
- Early, Mid-, and Late-Season Surveys



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Sources: Hexagon 2016 Aerial, WRA | Prepared By: mrochelle, 7/19/2019

# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 1)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

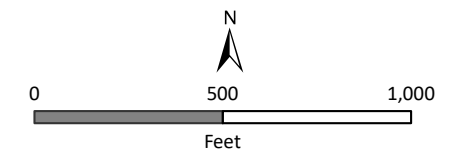
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 2)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



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Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 3)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

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# Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 4)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

- Phase 2 & Open Space Study Area - 11,549 ac.
- Federally-Endangered Plants
- State-Endangered Plants
- CNPS Rank 1 Plants

## Key to Species Codes

### Federally-Endangered Plants:

SIKE: Keck's checkerbloom

### State-Endangered Plants:

HEDI: Lake County western flax

### CNPS Rank 1 Plants:

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

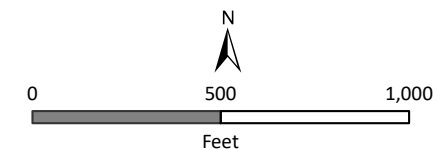
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 5)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



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Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 6)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



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Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 7)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

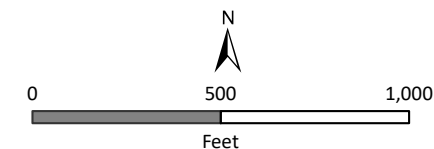
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 8)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

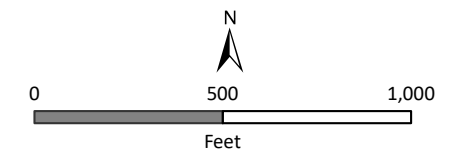
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 9)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower

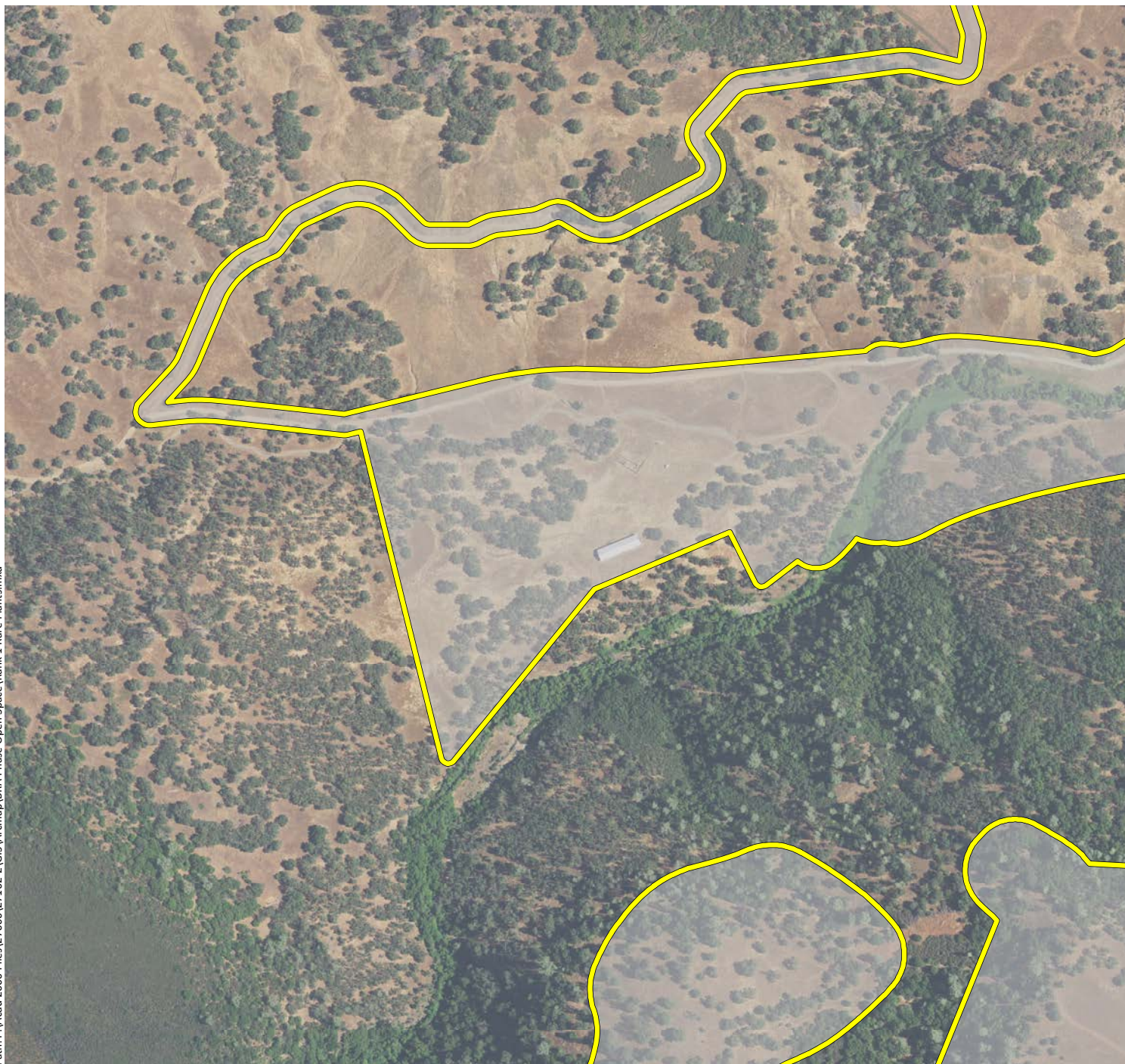


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Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 10)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

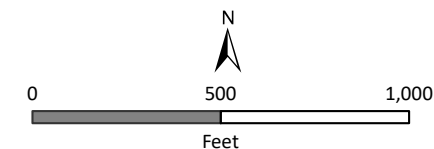
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 11)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 12)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 13)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

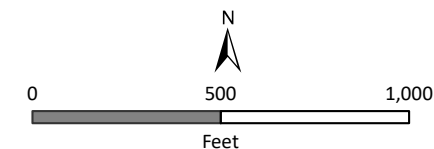
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 14)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 15)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

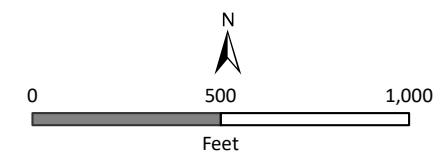
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

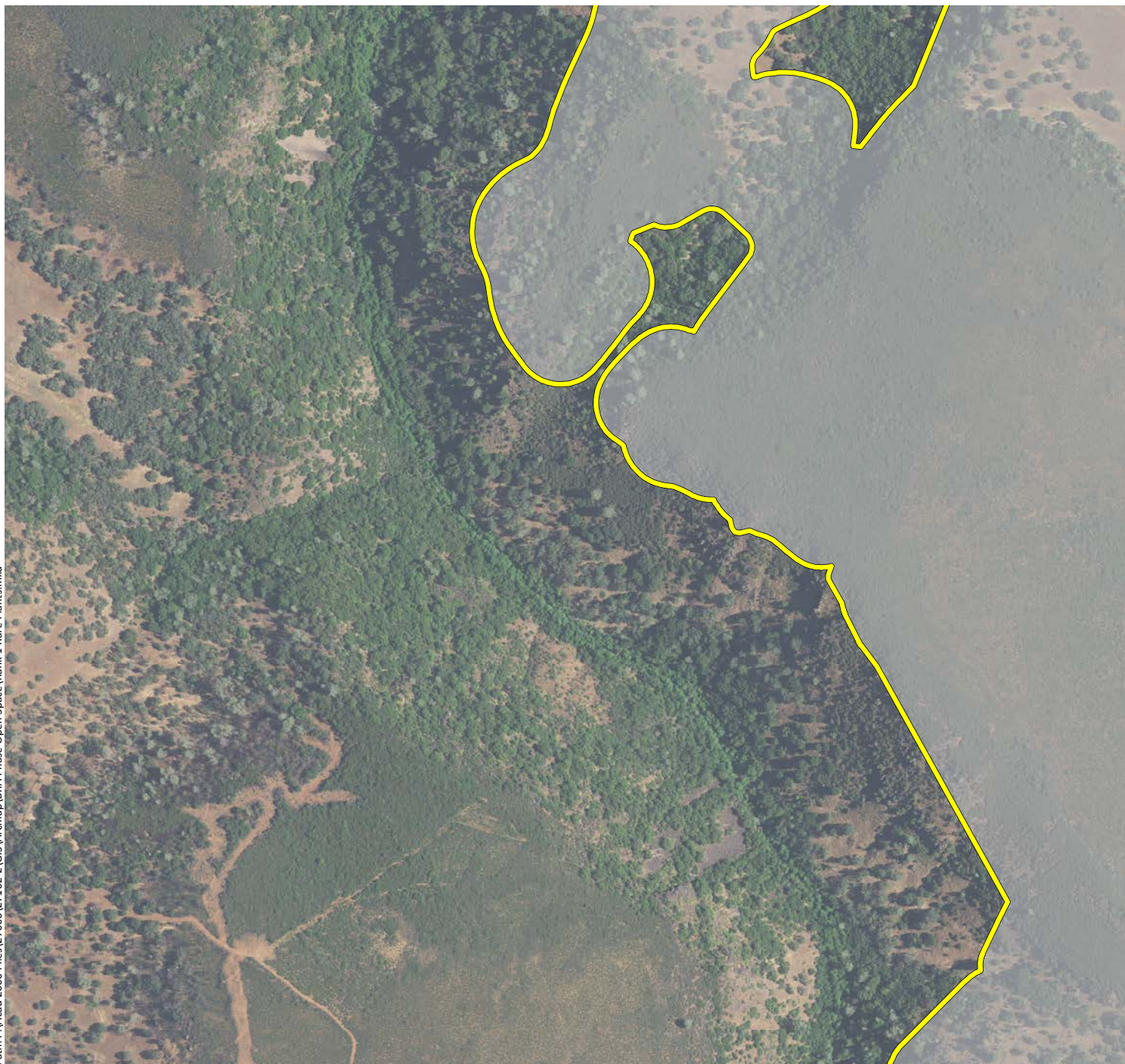
STMO: Morrison's jewelflower



Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 16)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

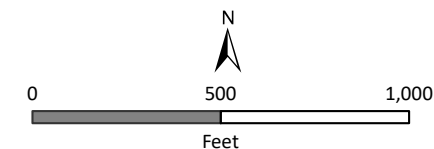
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 17)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 18)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 19)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 20)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 21)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

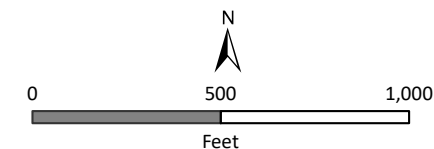
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

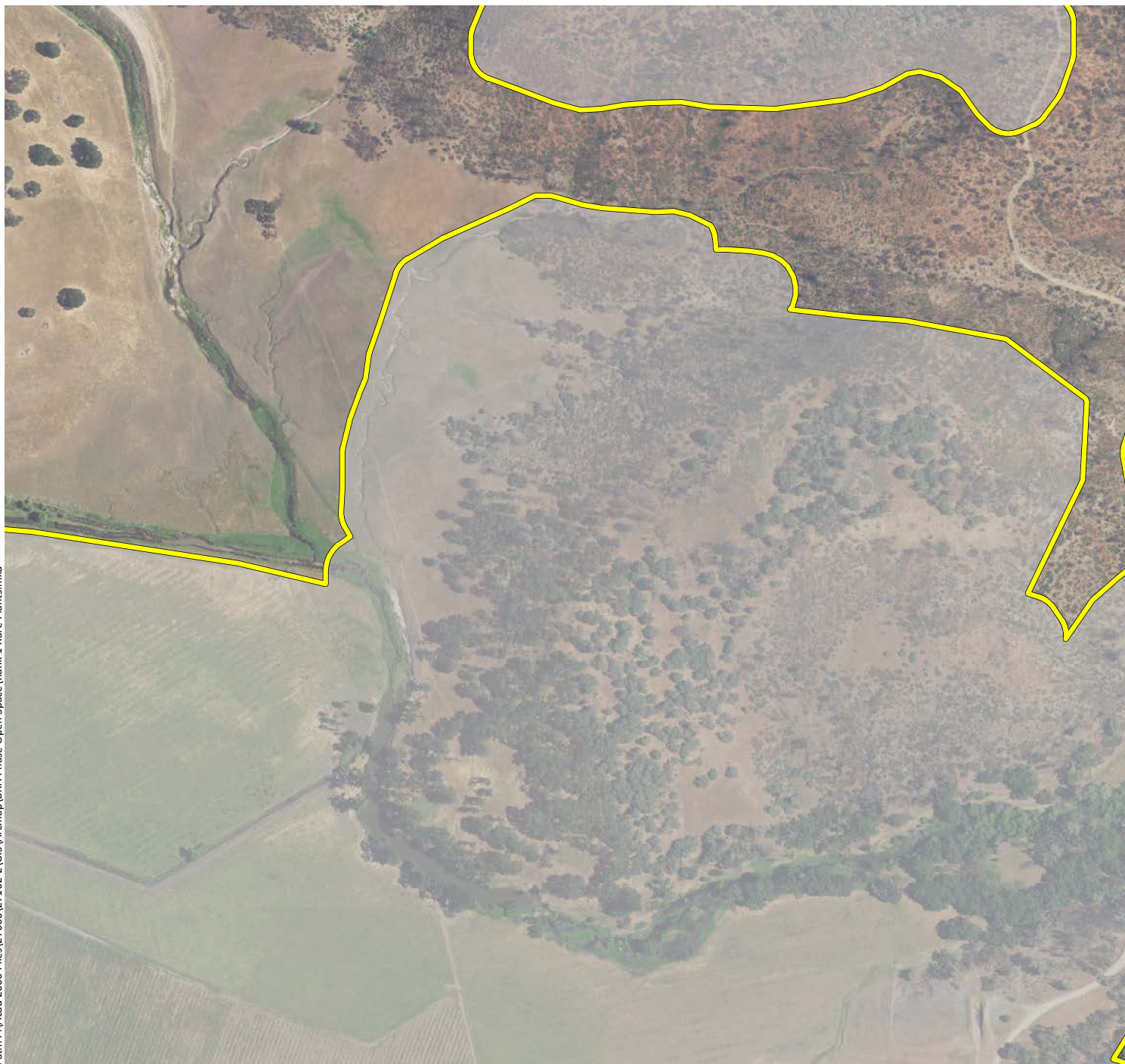
STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 22)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

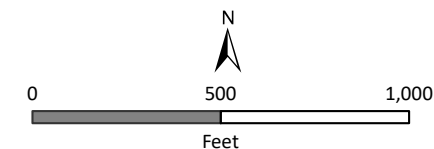
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 23)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 24)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 25)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 26)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 27)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 28)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

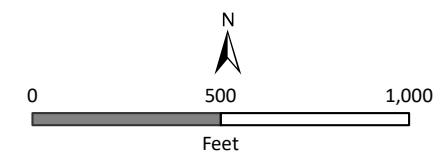
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 29)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

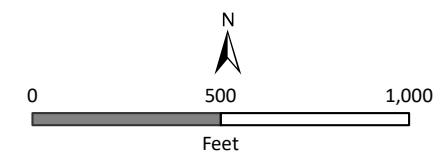
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 30)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 31)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 32)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 33)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower

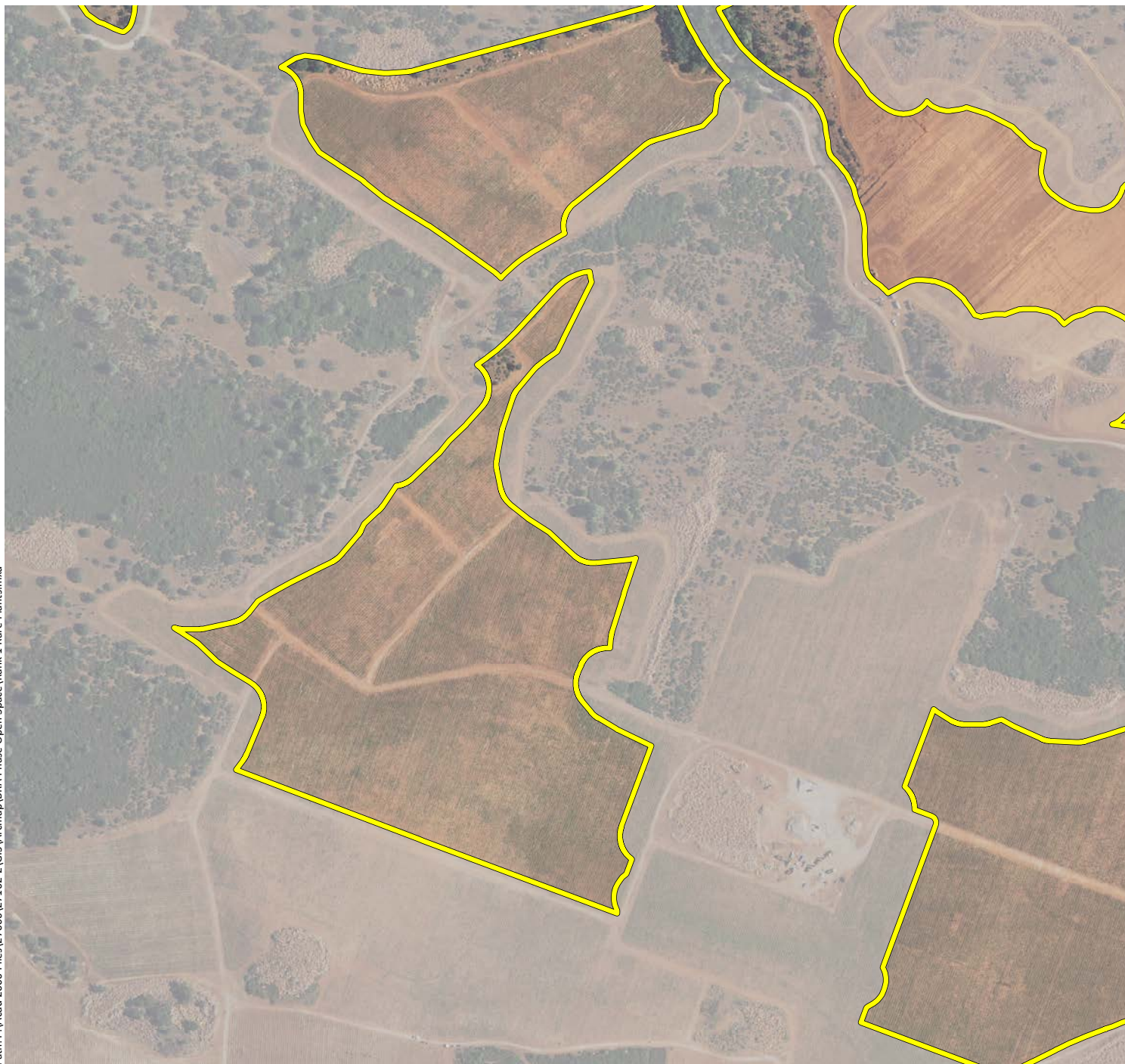


Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



# Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 34)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## Key to Species Codes

### Federally-Endangered Plants:

SIKE: Keck's checkerbloom

### State-Endangered Plants:

HEDI: Lake County western flax

### CNPS Rank 1 Plants:

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

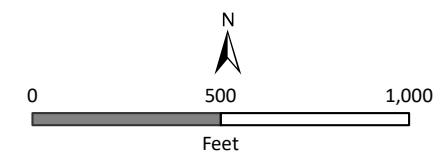
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

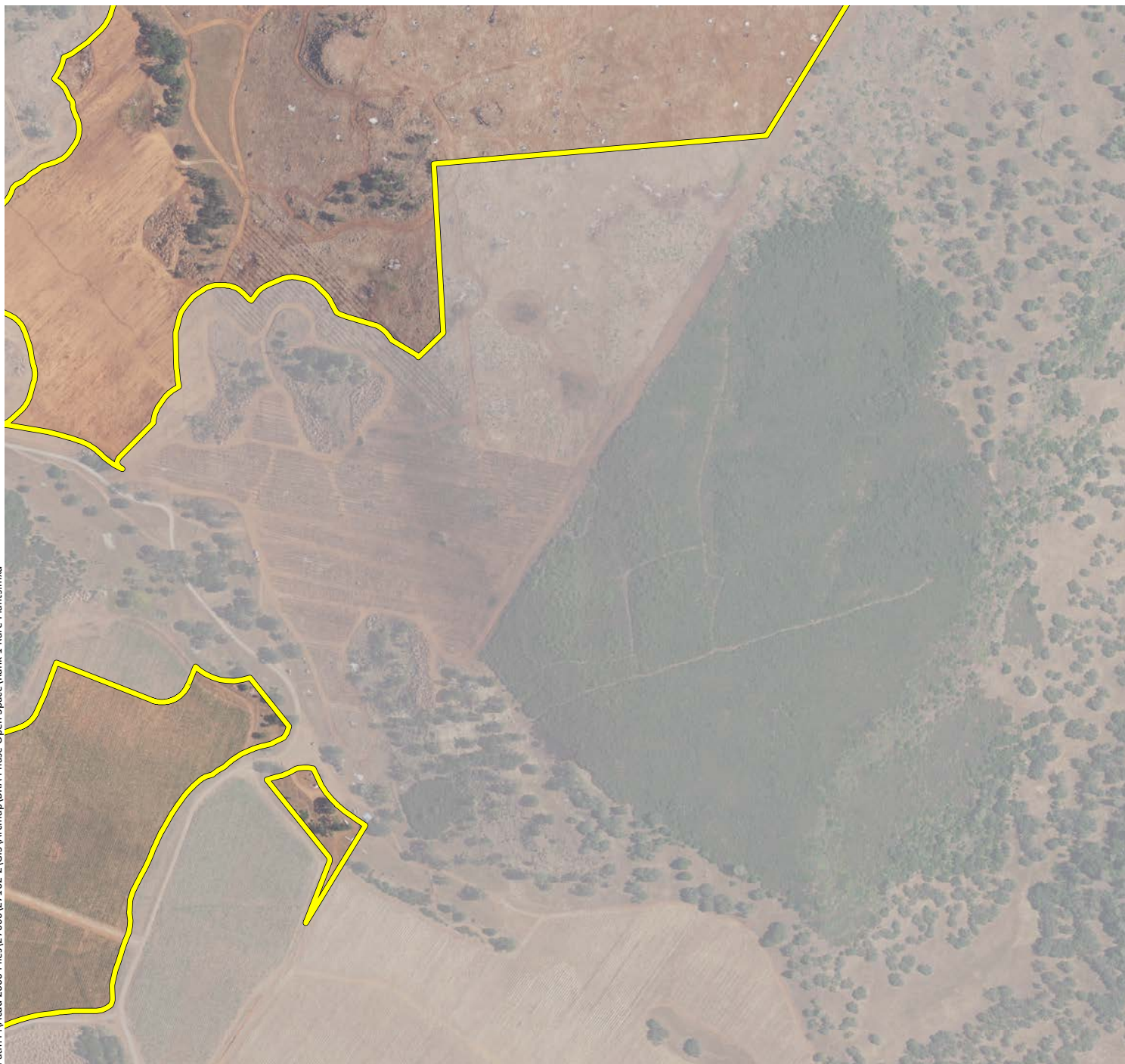
STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 35)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

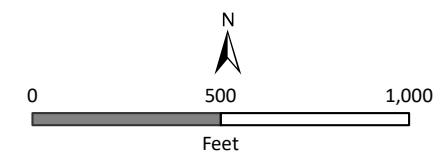
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 36)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 37)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower

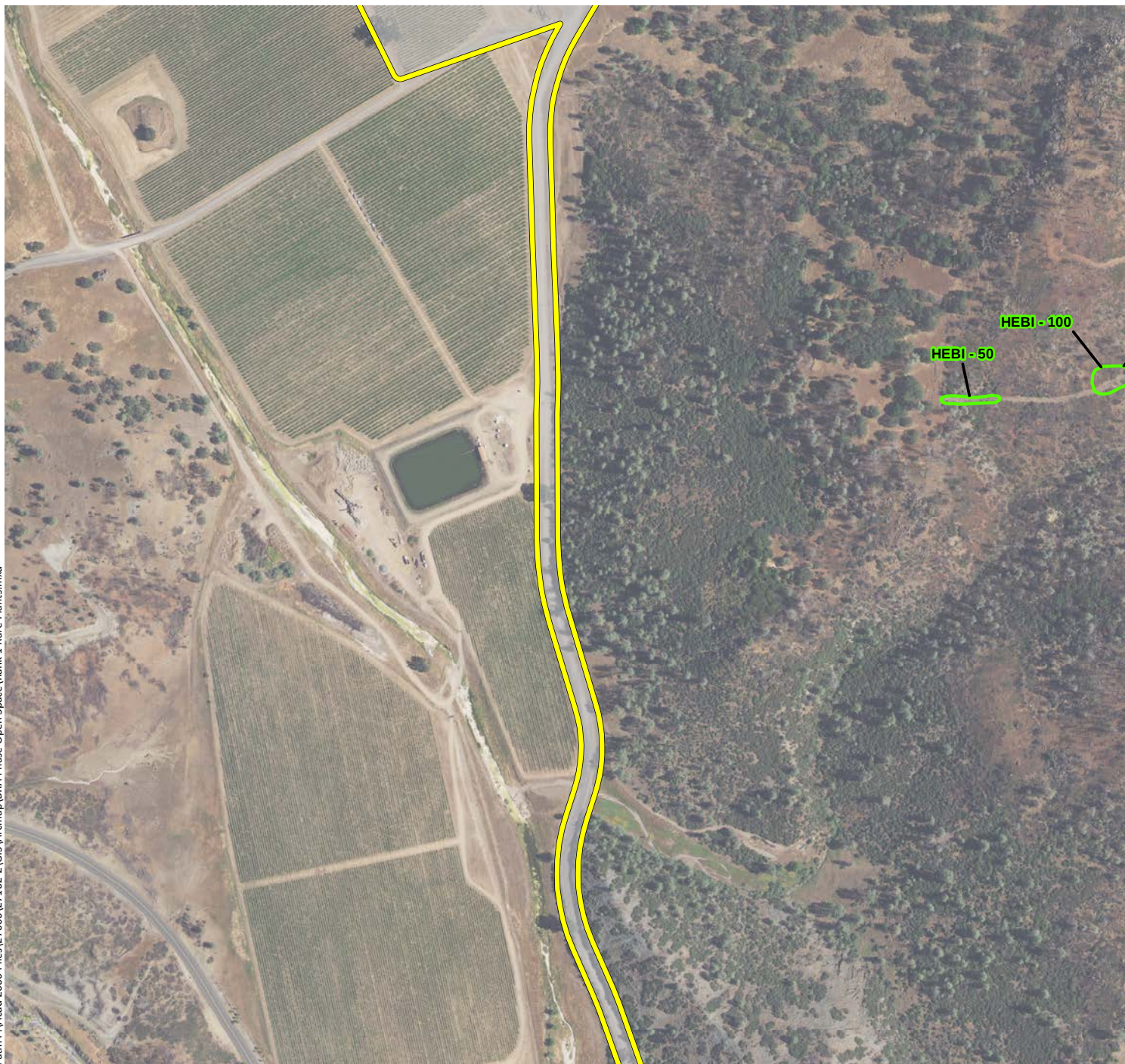


Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 38)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

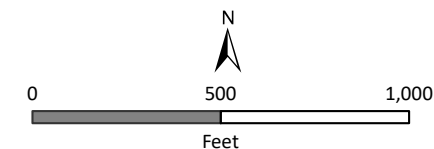
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 39)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 40)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 41)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 42)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 43)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 44)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 45)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

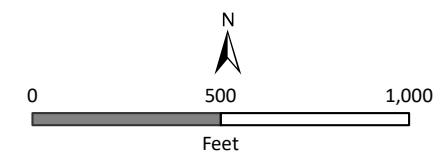
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 46)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 47)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

STHE - 250

STHE - 15

HEBI - 1000  
STHE - 2500

ERGR - 5

ERGR - 6

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 48)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

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BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

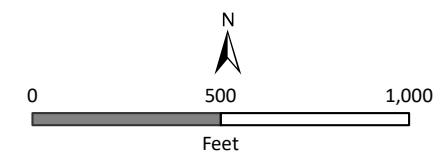
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

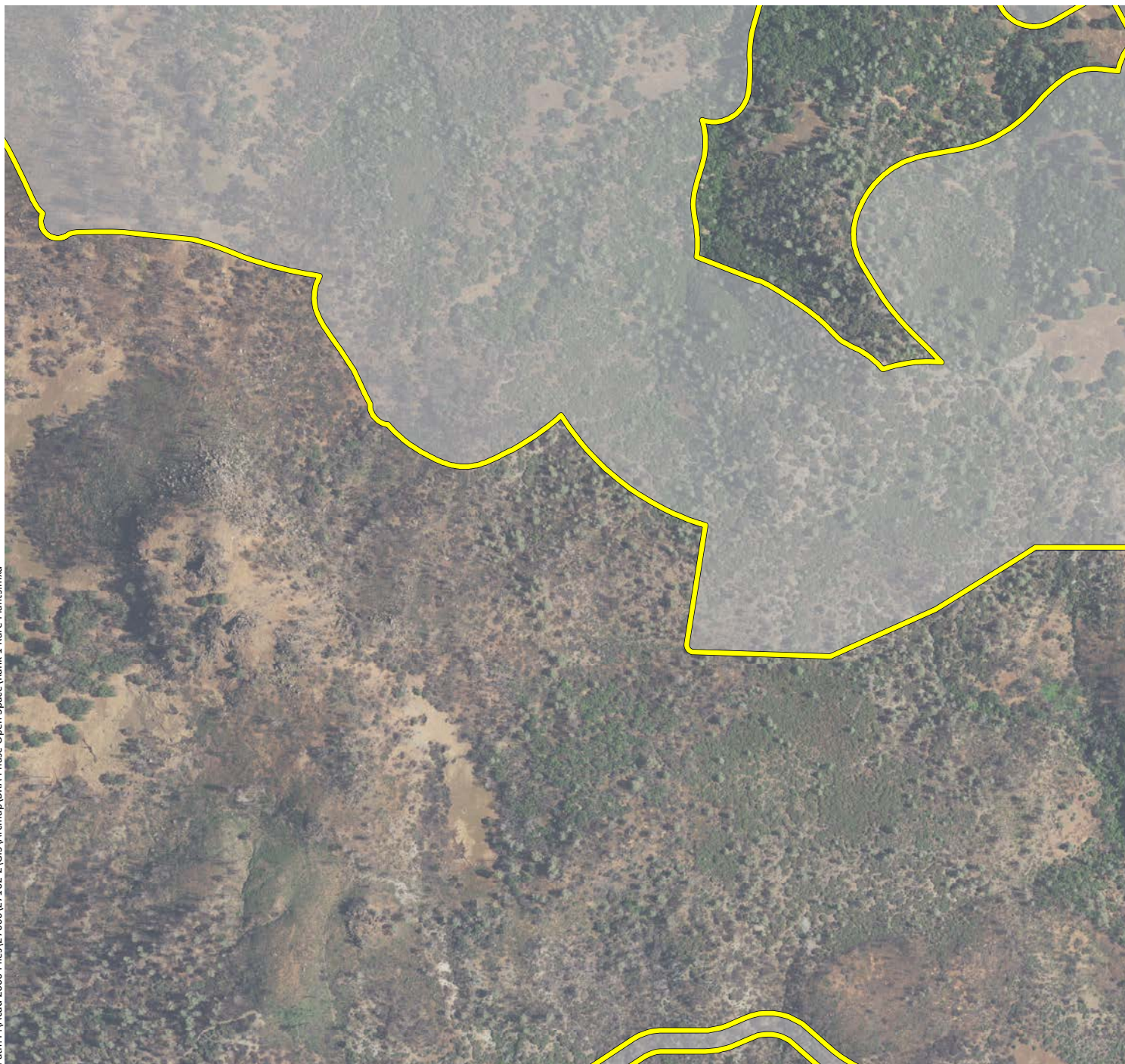
STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 49)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

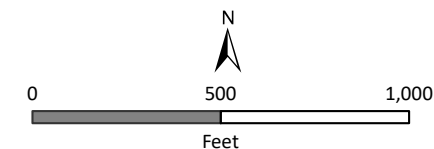
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 50)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

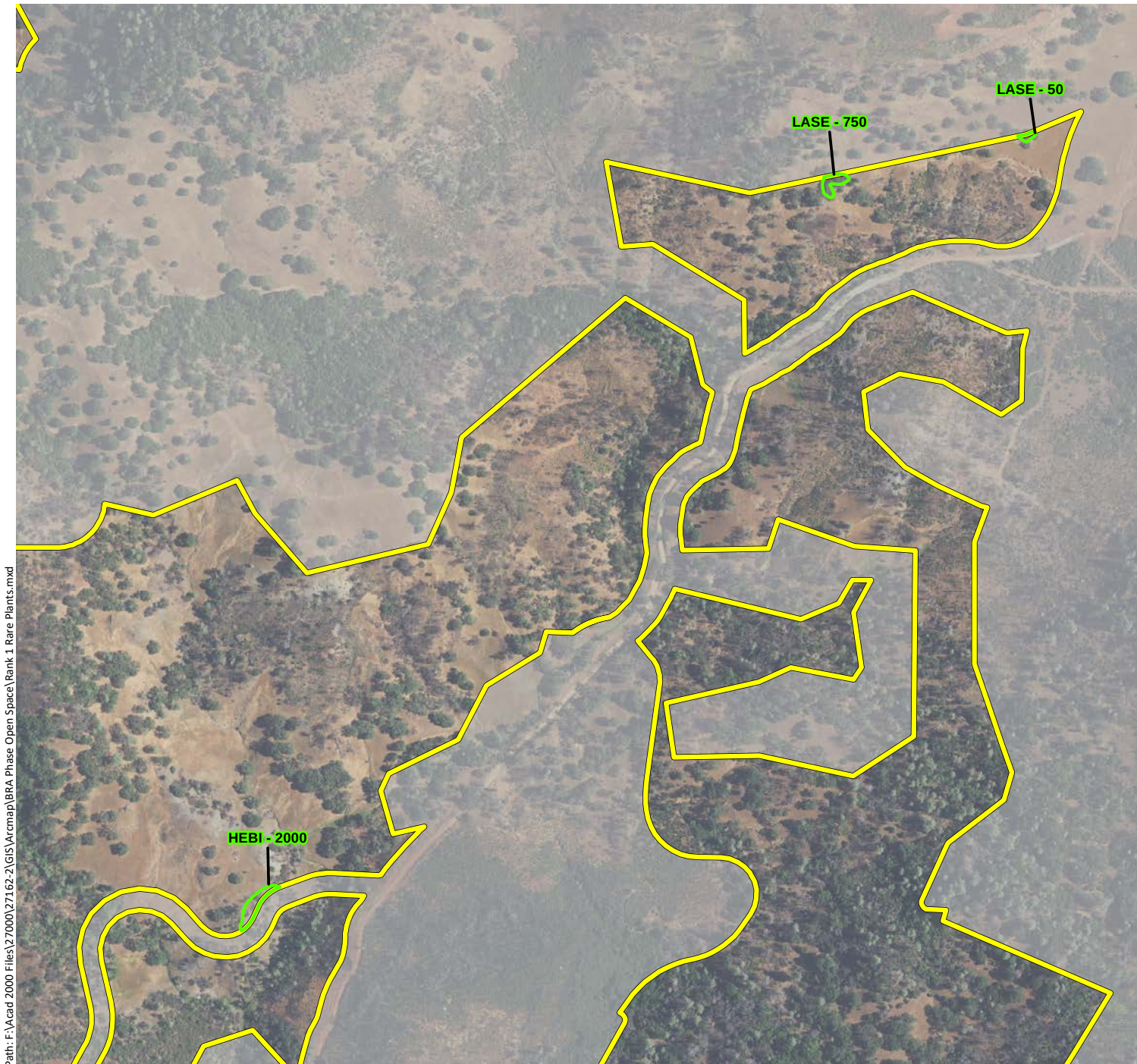
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 51)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

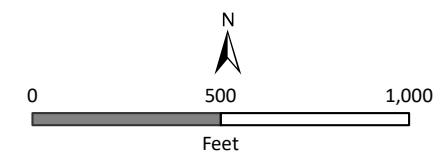
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 52)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 53)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 54)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

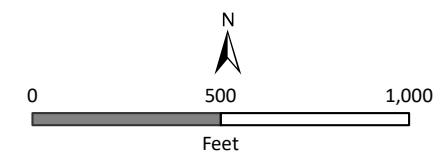
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

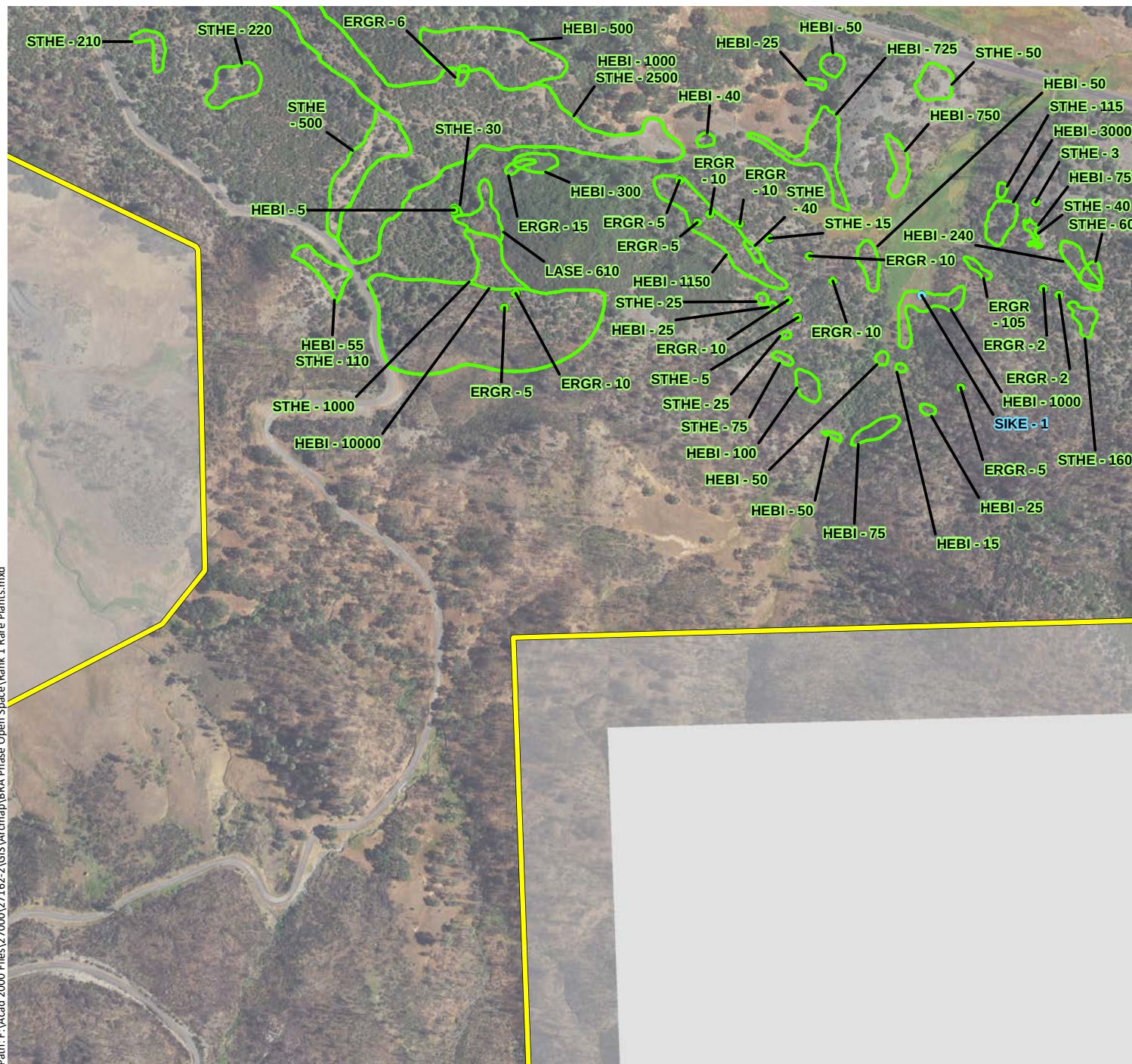
STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 55)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### Federally-Endangered Plants:

SIKE: Keck's checkerbloom

#### State-Endangered Plants:

HEDI: Lake County western flax

#### CNPS Rank 1 Plants:

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

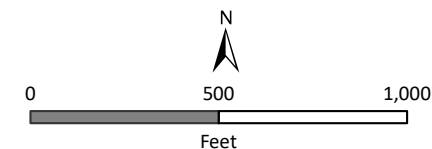
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 56)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 57)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

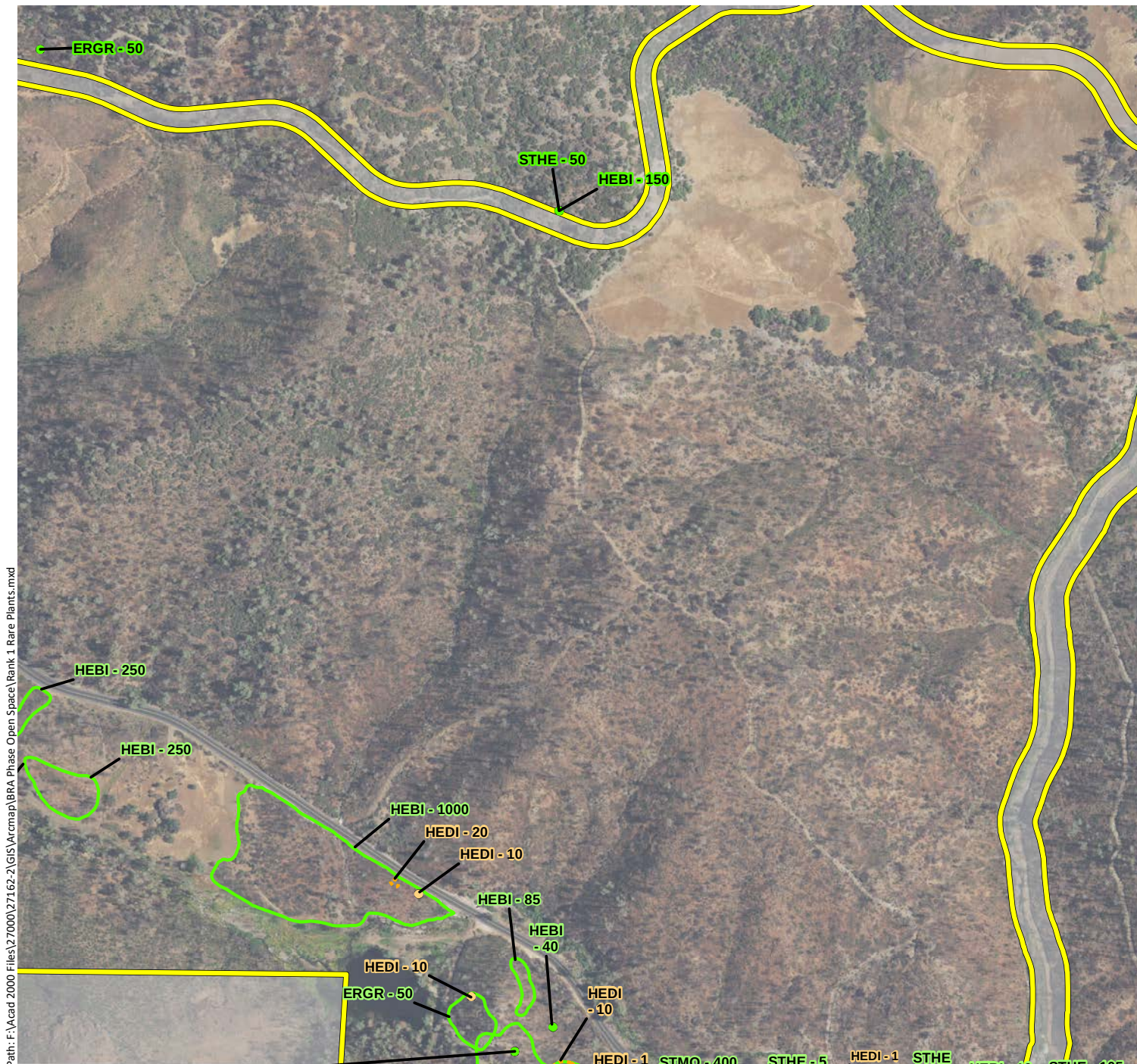
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 58)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 59)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

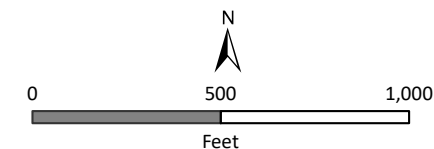
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 60)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

### Key to Species Codes

#### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

#### **State-Endangered Plants:**

HEDI: Lake County western flax

#### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

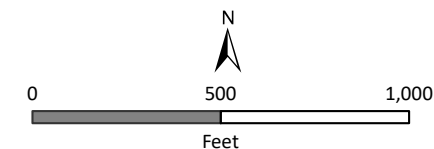
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

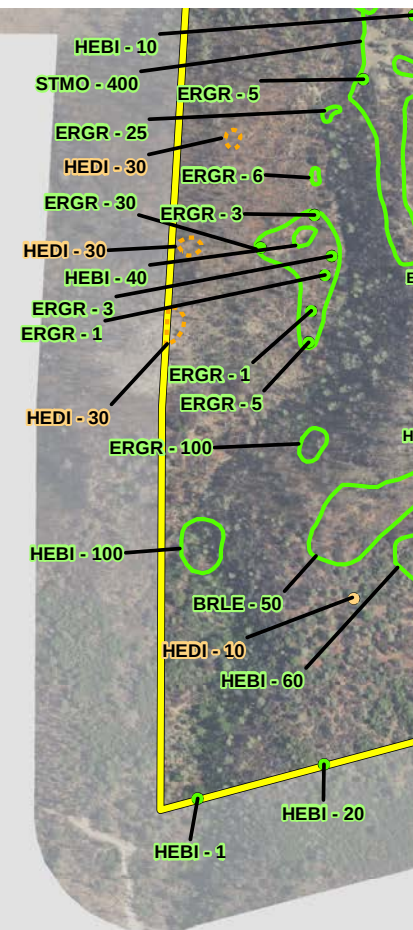
LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E1. Federal, State, and CNPS Rank 1 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 61)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

- Phase 2 & Open Space Study Area - 11,549 ac.
- Federally-Endangered Plants
- State-Endangered Plants
- CNPS Rank 1 Plants

### Key to Species Codes

#### Federally-Endangered Plants:

SIKE: Keck's checkerbloom

#### State-Endangered Plants:

HEDI: Lake County western flax

#### CNPS Rank 1 Plants:

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

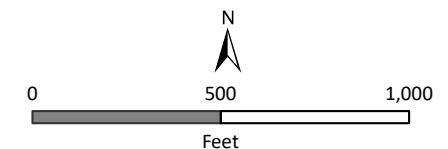
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower





# **Appendix E1.** **Federal, State, and** **CNPS Rank 1 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Sheet 62)**

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  Federally-Endangered Plants
-  State-Endangered Plants
-  CNPS Rank 1 Plants

## **Key to Species Codes**

### **Federally-Endangered Plants:**

SIKE: Keck's checkerbloom

### **State-Endangered Plants:**

HEDI: Lake County western flax

### **CNPS Rank 1 Plants:**

ASJE: Jepson's milkvetch

BAMA: Big-scale balsamroot

BRLE: Narrow-flowered California brodiaea

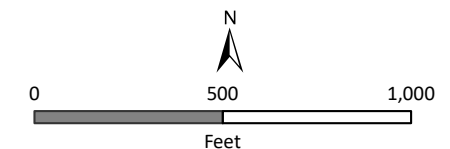
ERGR: Greene's narrow-leaved fleabane

HEBI: Two carpellate western flax

LASE: Colusa layia

STHE: Green jewelflower

STMO: Morrison's jewelflower



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Xrcmap\BRA Phase Open Space\Rank 1 Rare Plants.mxd

Sources: 2016 Hexagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

## **APPENDIX E2**

### **CNPS RANK 4 SPECIAL-STATUS PLANT SPECIES OBSERVED WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**

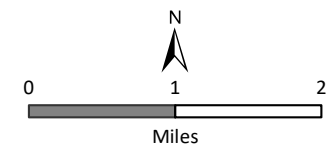




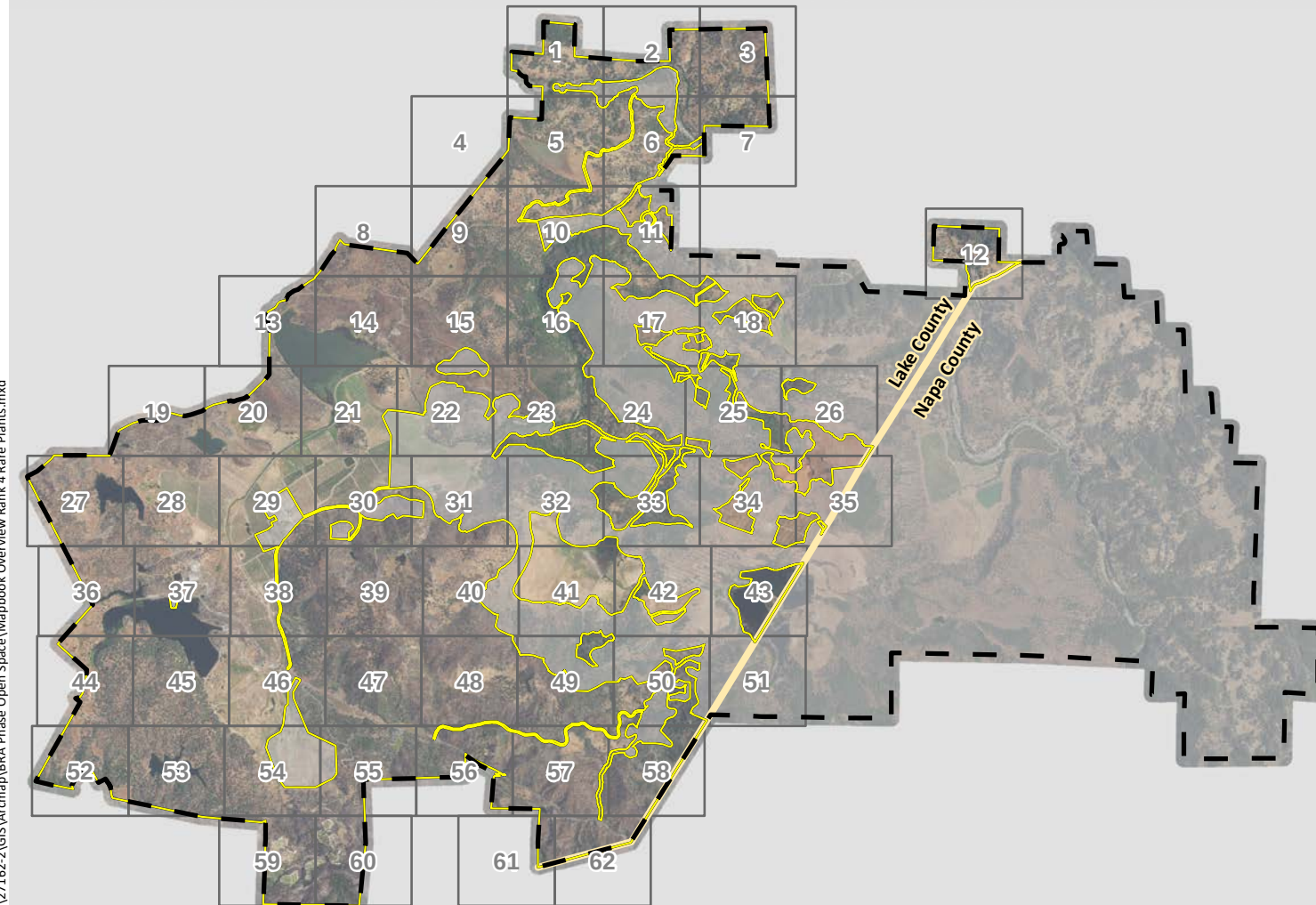
# **Appendix E2.** **CNPS Rank 4 Special-Status** **Plant Species Observed within** **the Phase 2 and Open Space** **Study Area** **(Mapbook Overview)**

Maha Resort and Guenoc Valley  
 Development, Phase 2 and Open Space

-  Property Boundary
-  Phase 2 and Open Space Study Area
-  Mapbook Grid
-  County Boundary



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Mapbook Overview Rank 4 Rare Plants.mxd



Sources: Hexagon 2016 Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 1)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larkspur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 2)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed trileteia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 3)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larkspur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

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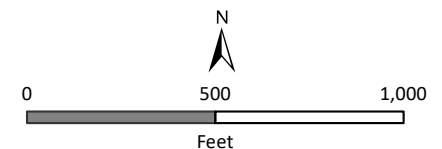
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 4)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.  
 CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
ASCL: Cleveland's milk-vetch  
CACOOX: Mt. Saint Helena morning glory  
CAUN: Pink star-tulip  
CLGRTR: Tracy's clarkia  
CODI: Serpentine collomia  
COTEBR: Serpentine bird's beak  
DEUL: Swamp Larkspur  
EMU/MINU: Bare monkeyflower  
ERHE: Mt. Saint Helena fawn lily  
FRPU: Purdy's fritillary  
HEEX: Serpentine sunflower  
MOVI: Green monardella  
NACO: Cotula navarretia  
NAJE: Jepson's navarretia  
SECLCL: Cleveland's ragwort  
TOFO: Marsh zigadenus  
TRLU: Dark-mouthed triteleia





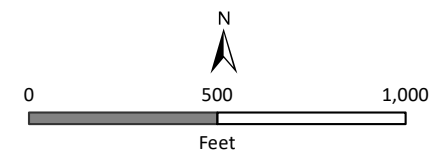
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 5)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



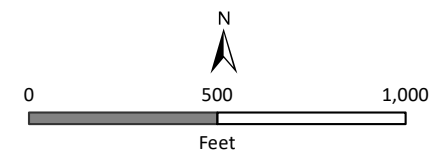
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 6)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed trileia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 7)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

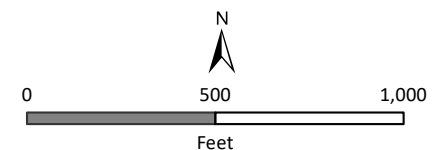
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 8)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Map\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 9)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 10)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wrcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 11)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larksbur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



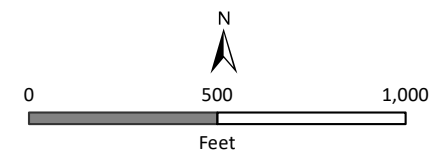
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 12)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larkspur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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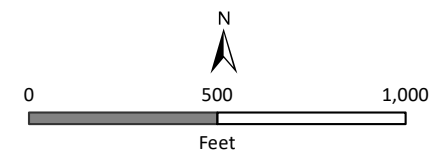
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 13)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteileia



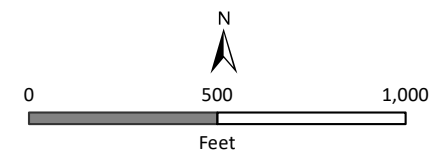
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 14)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

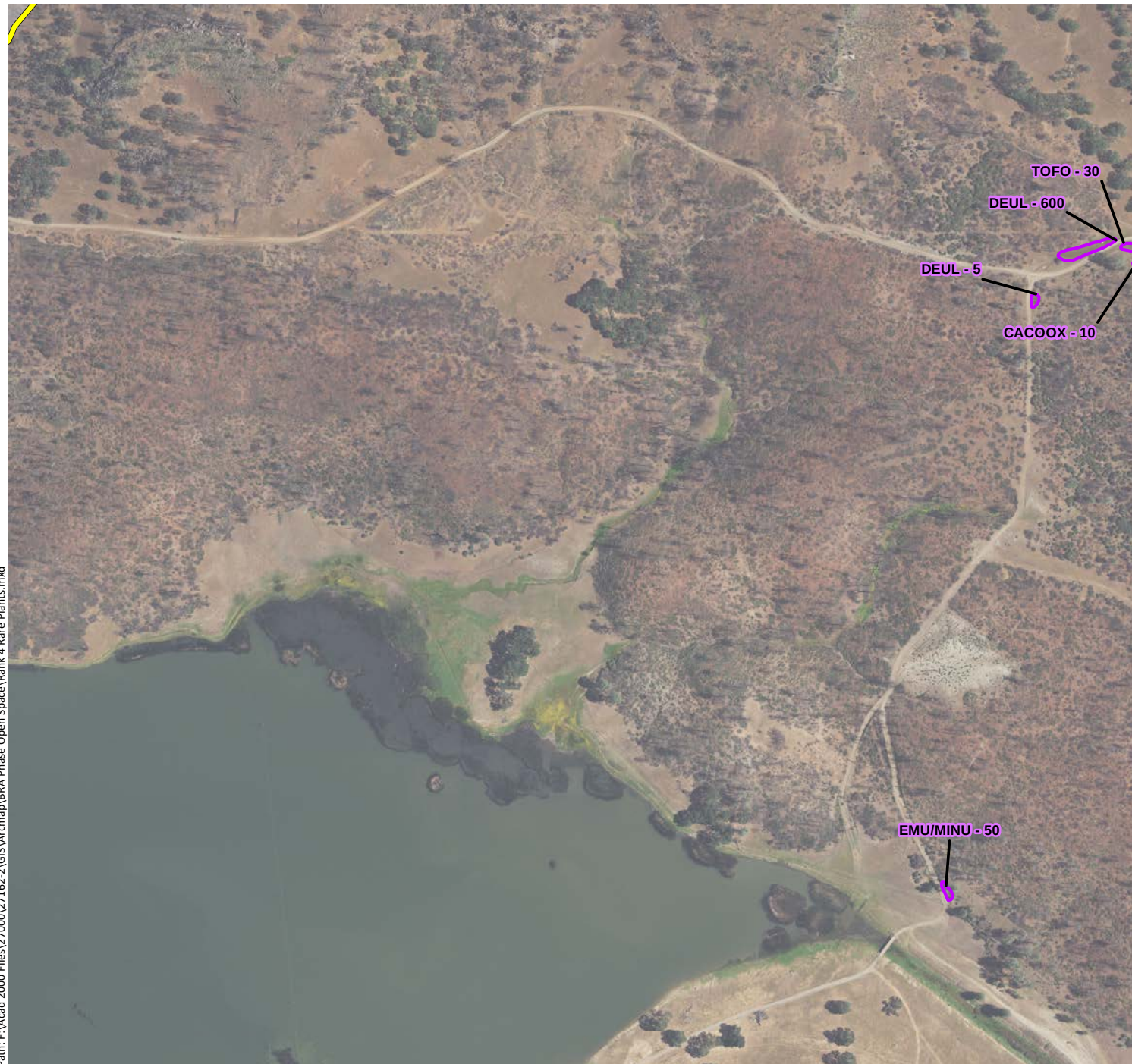
-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 15)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 16)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 17)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



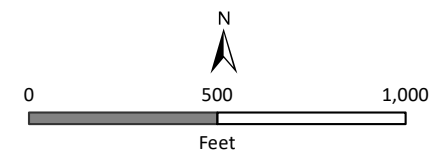
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 18)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 19)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019

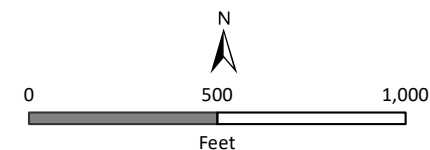
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 20)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larksbur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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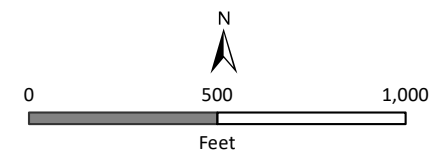
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 21)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia





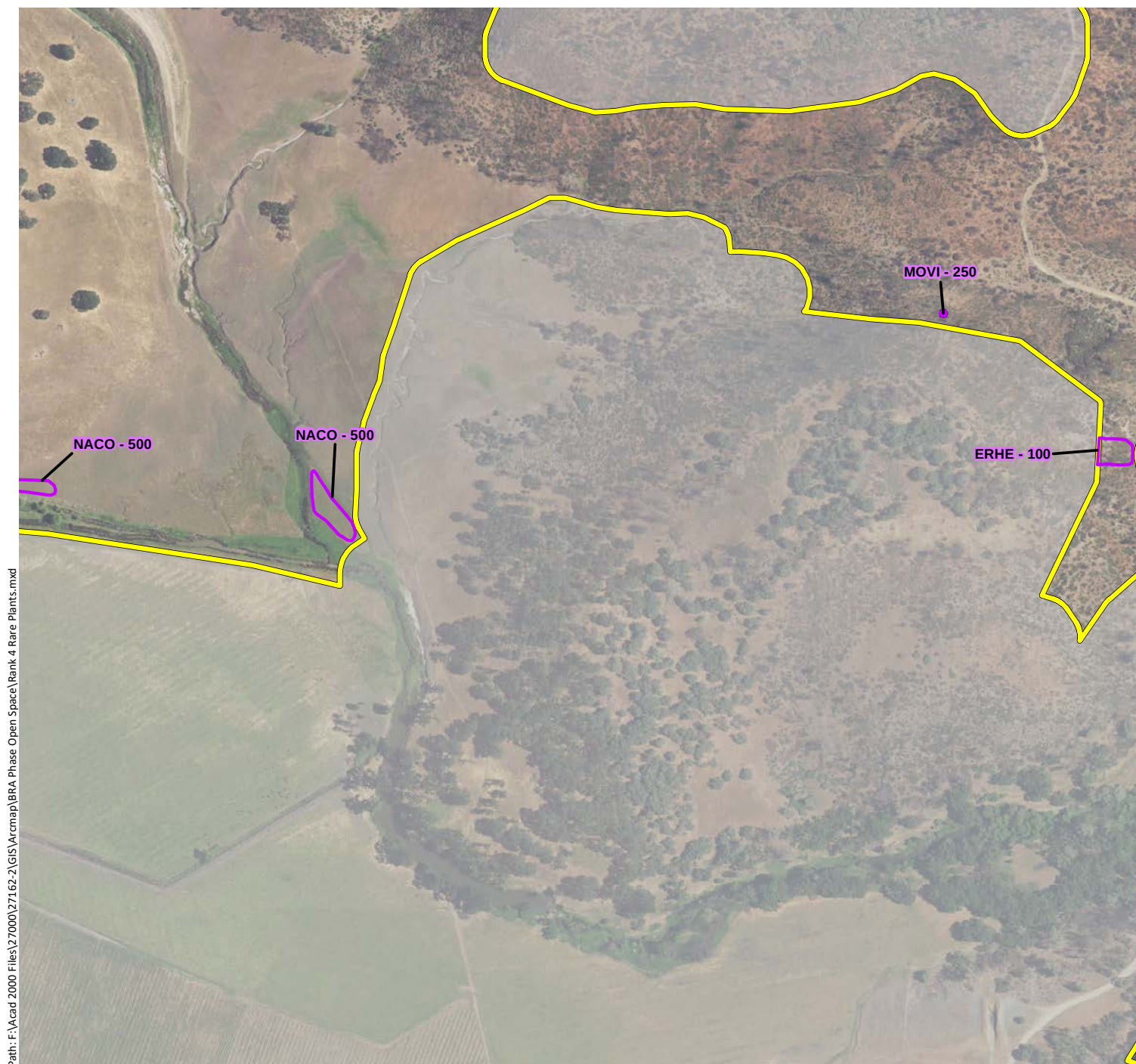
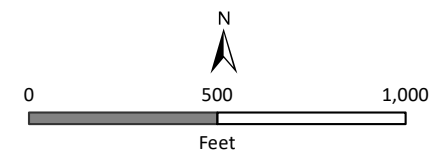
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 22)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 23)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triletea



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 24)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteilea



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



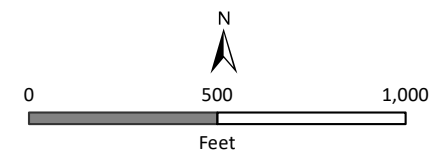
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 25)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



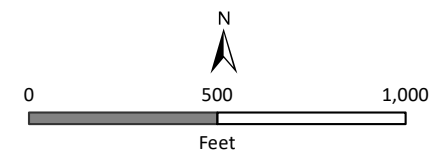
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 26)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



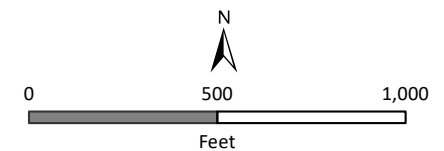
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 27)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 28)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: *Cotula navarretia*
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triletia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



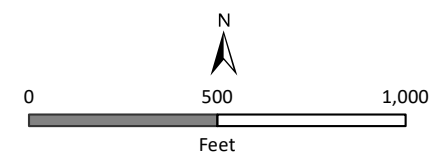
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 29)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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NACO - 25000

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



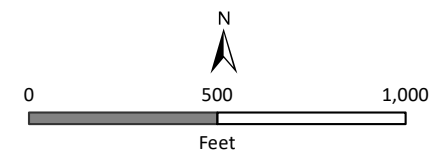
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 30)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larksbur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



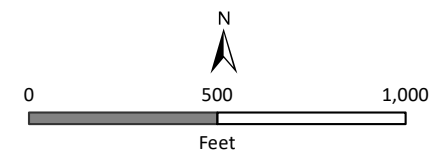
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 31)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larksbur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteilea



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



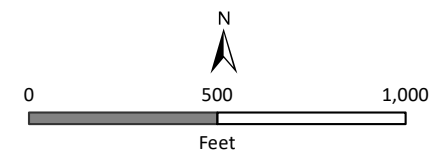
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 32)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 33)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia

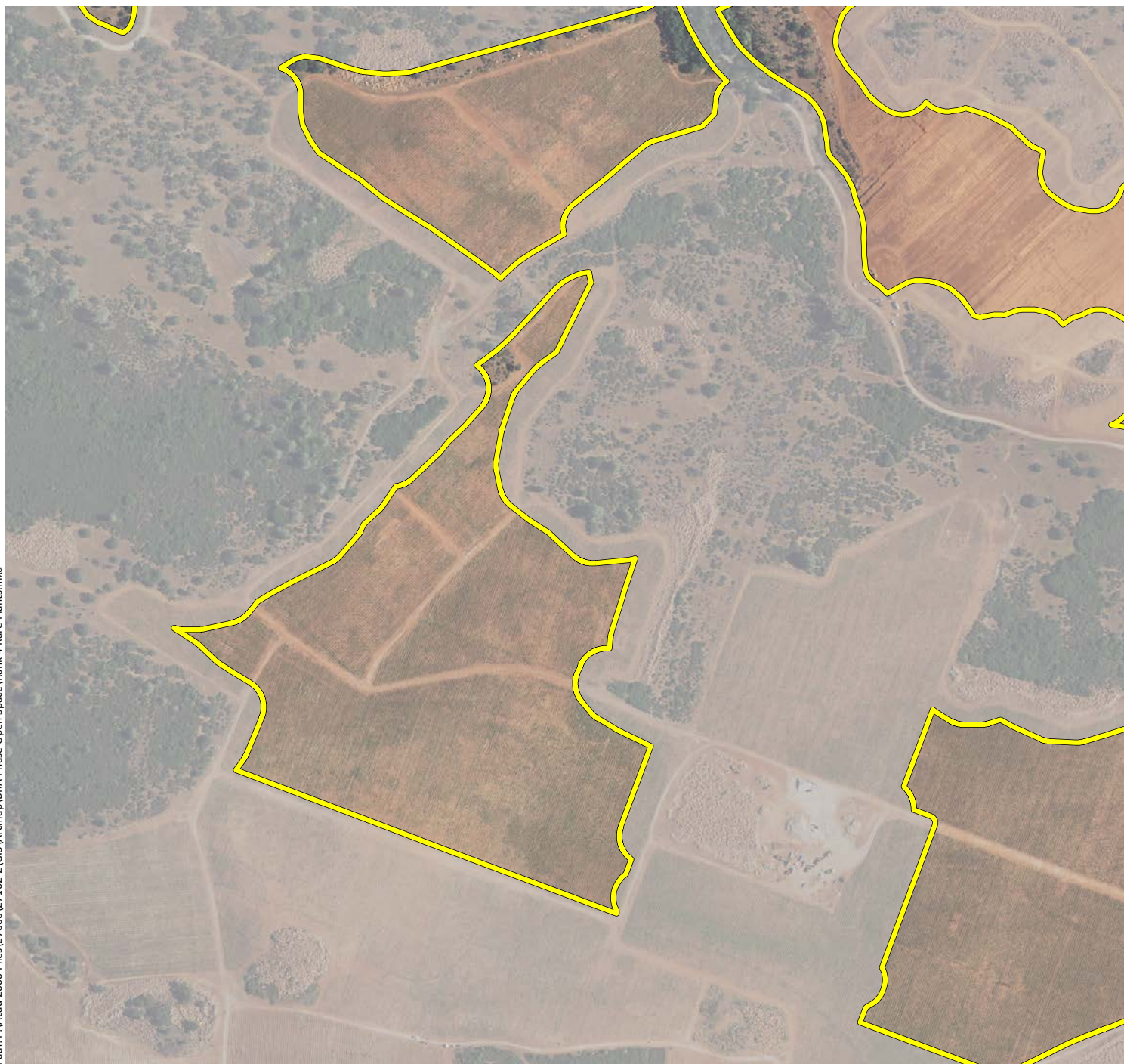


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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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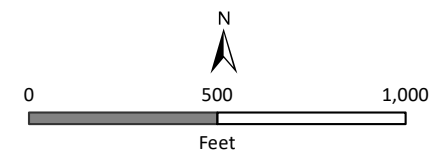
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 34)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.  
 CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon  
ASCL: Cleveland's milk-vetch  
CACOOX: Mt. Saint Helena morning glory  
CAUN: Pink star-tulip  
CLGRTR: Tracy's clarkia  
CODI: Serpentine collomia  
COTEBR: Serpentine bird's beak  
DEUL: Swamp Larkspur  
EMU/MINU: Bare monkeyflower  
ERHE: Mt. Saint Helena fawn lily  
FRPU: Purdy's fritillary  
HEEX: Serpentine sunflower  
MOVI: Green monardella  
NACO: Cotula navarretia  
NAJE: Jepson's navarretia  
SECLCL: Cleveland's ragwort  
TOFO: Marsh zigadenus  
TRLU: Dark-mouthed triteleia





## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 35)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 36)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia

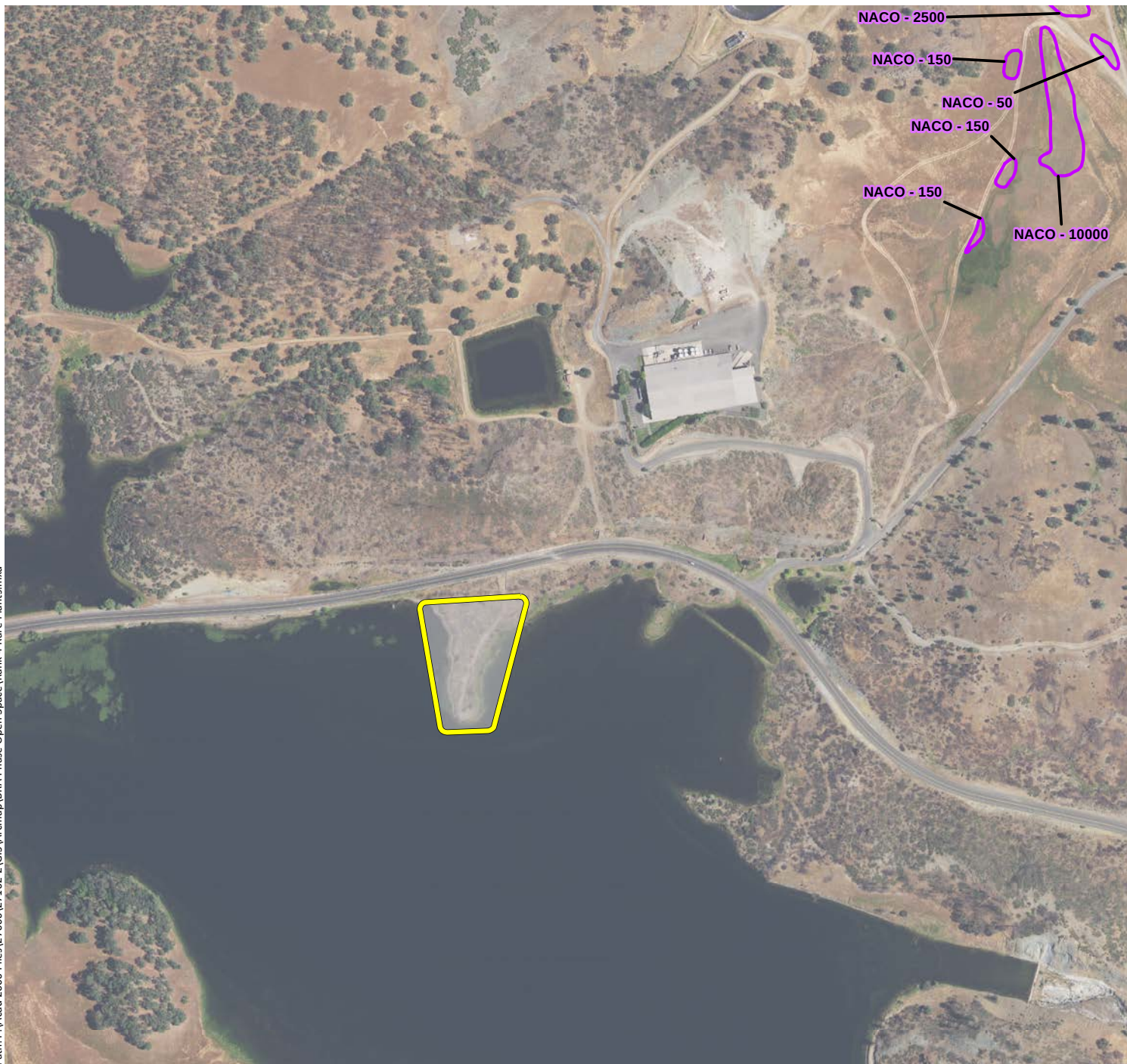


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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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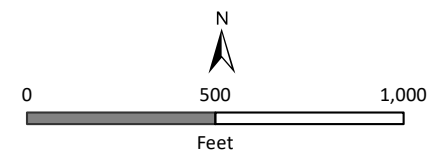
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 37)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia





## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 38)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteilea



DEUL - 15

HEEX - 100



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 39)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
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- DEUL: Swamp Larkspur
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- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia

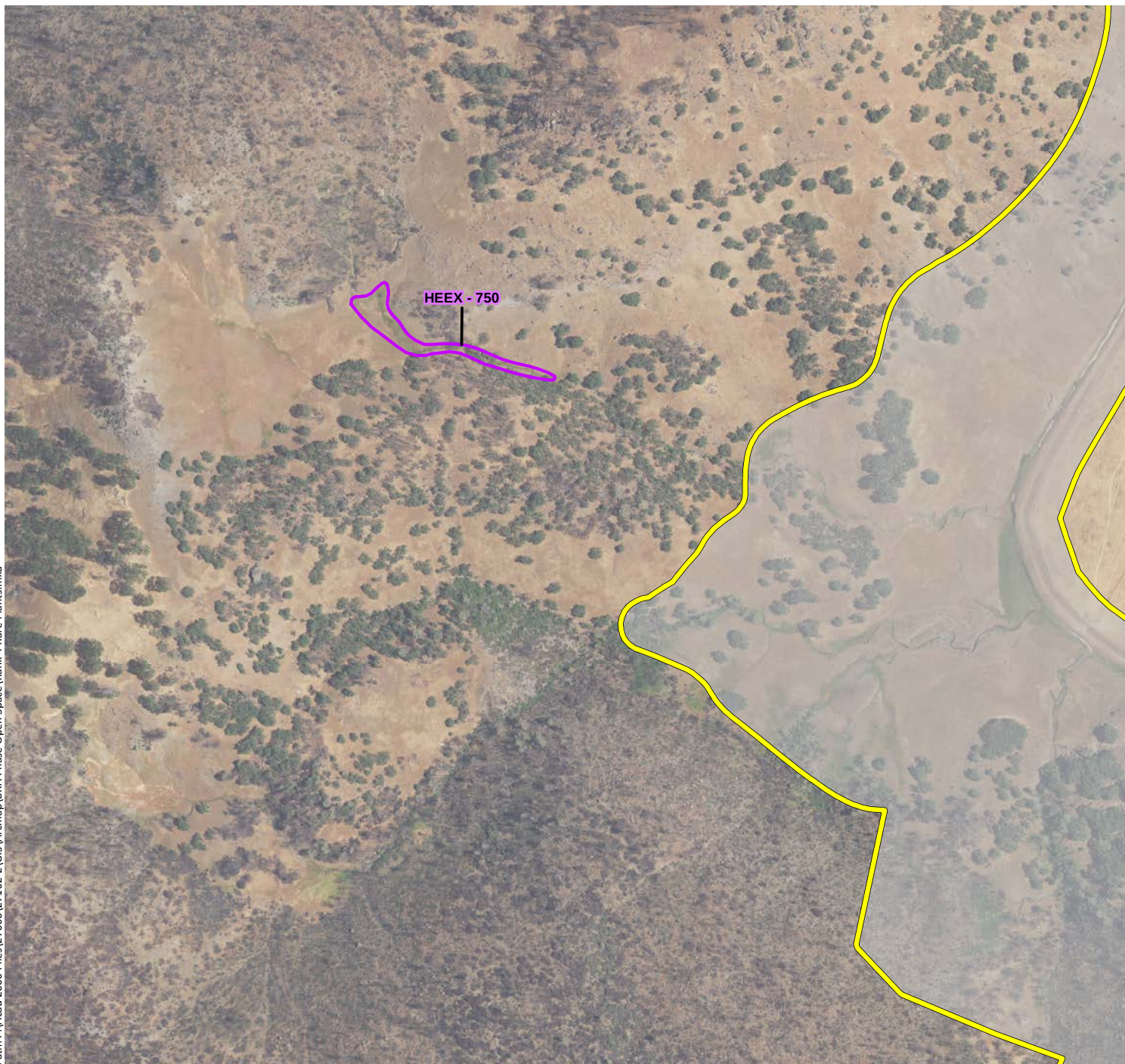


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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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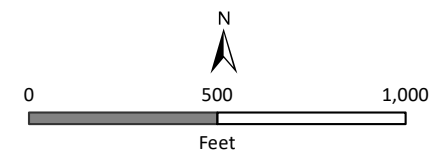
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 40)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



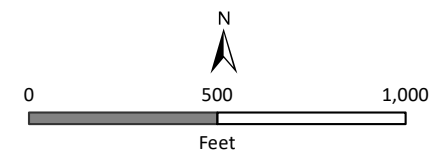
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 41)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
 ASCL: Cleveland's milk-vetch  
 CACOOX: Mt. Saint Helena morning glory  
 CAUN: Pink star-tulip  
 CLGRTR: Tracy's clarkia  
 CODI: Serpentine collomia  
 COTEBR: Serpentine bird's beak  
 DEUL: Swamp Larksbur  
 EMU/MINU: Bare monkeyflower  
 ERHE: Mt. Saint Helena fawn lily  
 FRPU: Purdy's fritillary  
 HEEX: Serpentine sunflower  
 MOVI: Green monardella  
 NACO: Cotula navarretia  
 NAJE: Jepson's navarretia  
 SECLCL: Cleveland's ragwort  
 TOFO: Marsh zigadenus  
 TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 42)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



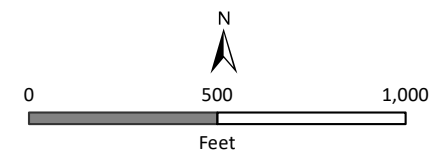
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 43)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
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- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 44)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteileia





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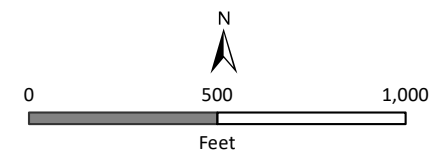
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 45)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia





## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 46)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 47)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

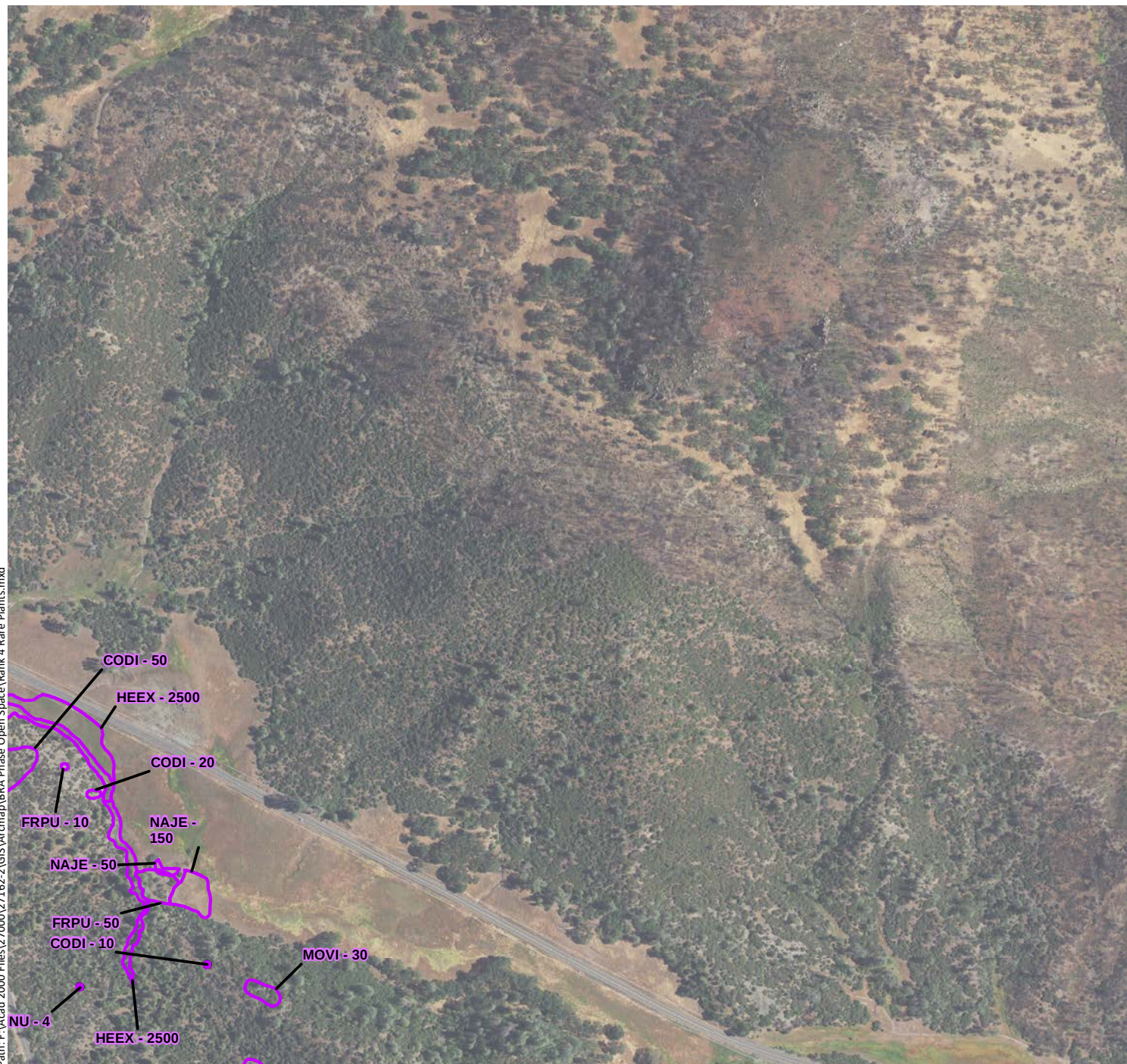
-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larksbur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed trilelia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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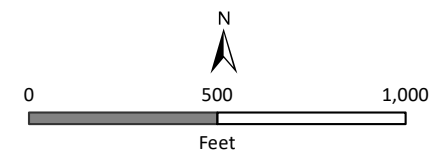
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 48)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

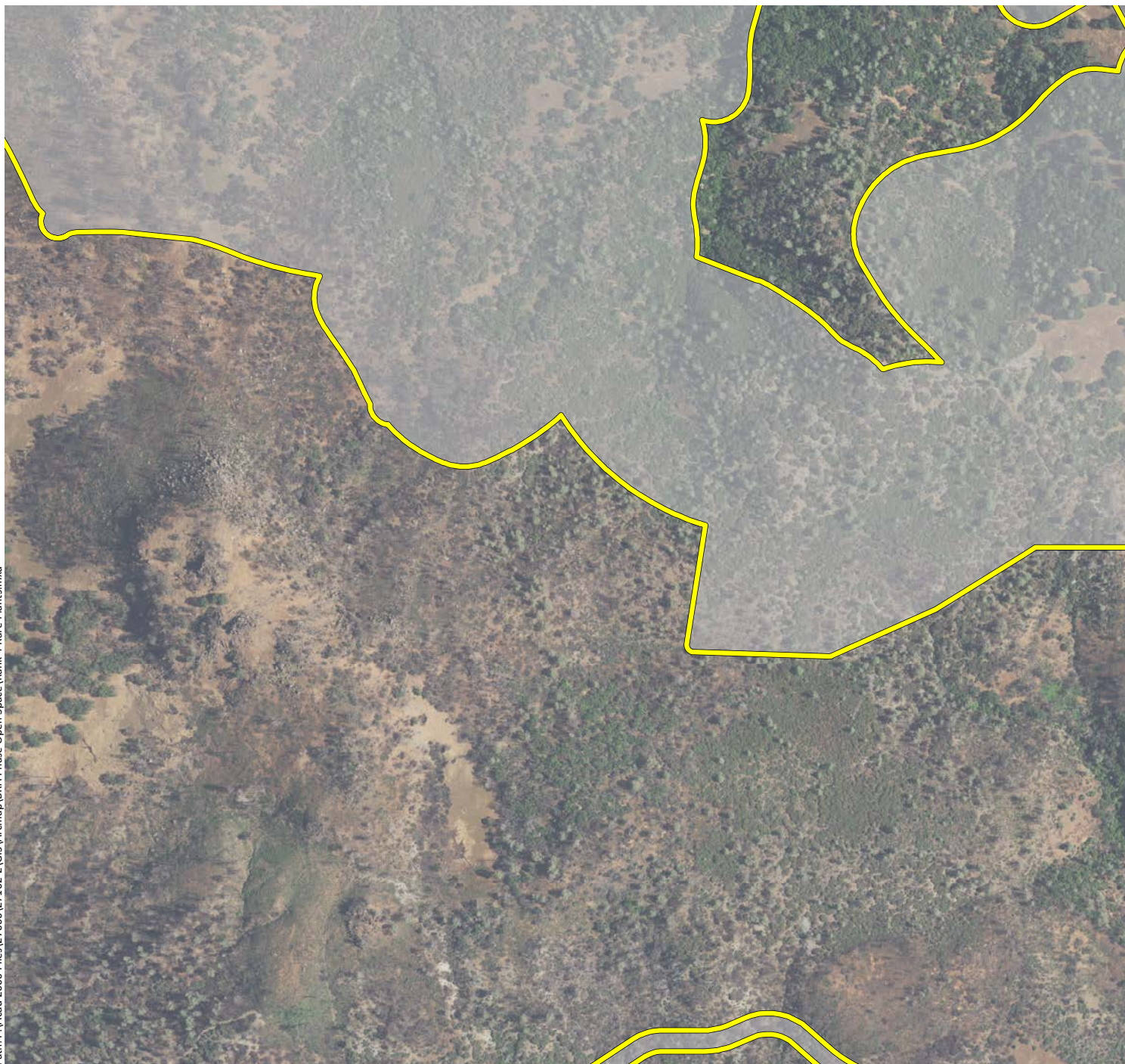
### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia





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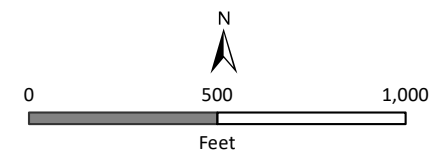
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 49)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia





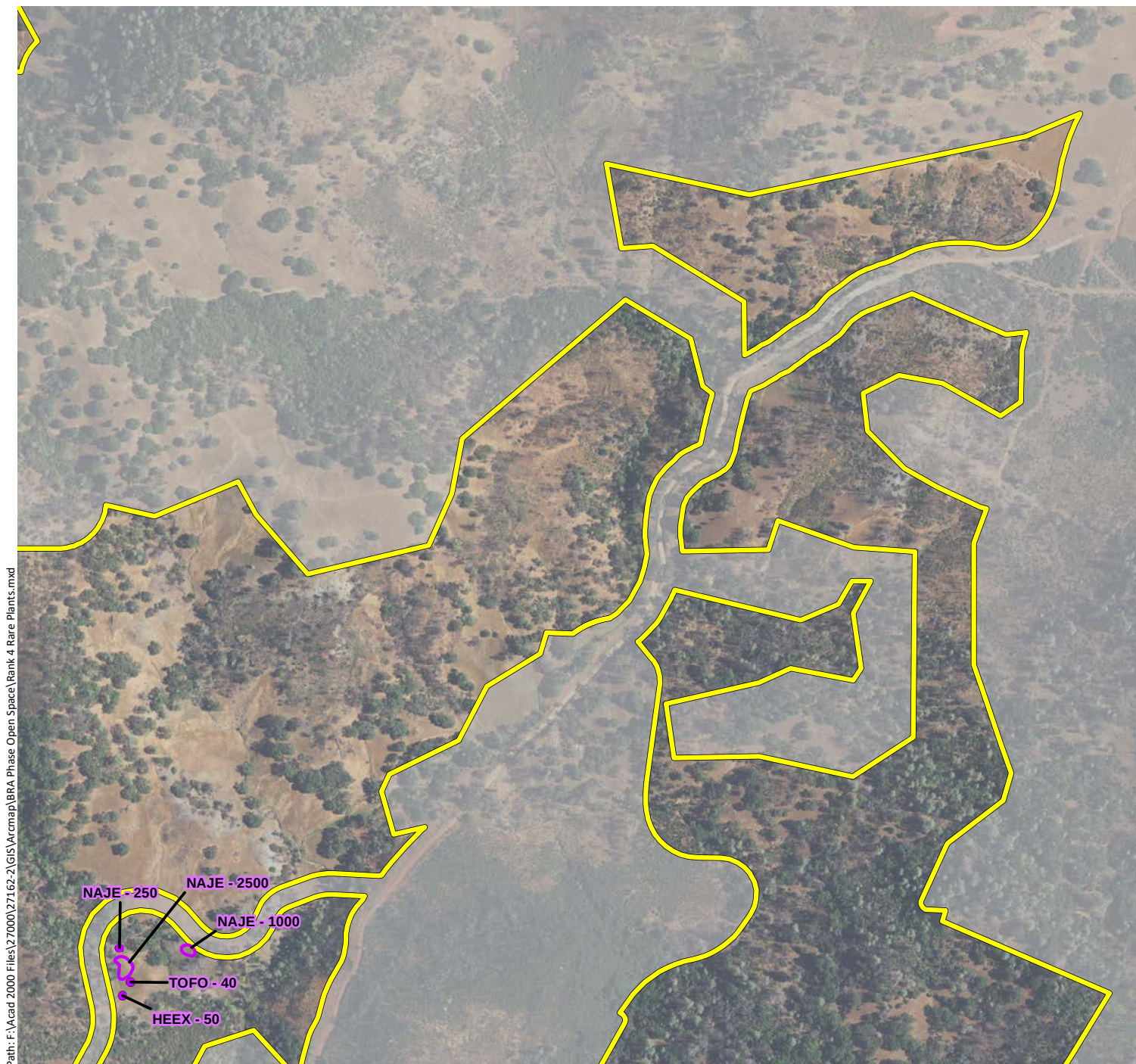
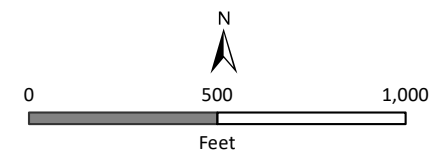
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 50)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed trileteia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 51)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.  
 CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
ASCL: Cleveland's milk-vetch  
CACOOX: Mt. Saint Helena morning glory  
CAUN: Pink star-tulip  
CLGRTR: Tracy's clarkia  
CODI: Serpentine collomia  
COTEBR: Serpentine bird's beak  
DEUL: Swamp Larksbur  
EMU/MINU: Bare monkeyflower  
ERHE: Mt. Saint Helena fawn lily  
FRPU: Purdy's fritillary  
HEEX: Serpentine sunflower  
MOVI: Green monardella  
NACO: Cotula navarretia  
NAJE: Jepson's navarretia  
SECLCL: Cleveland's ragwort  
TOFO: Marsh zigadenus  
TRLU: Dark-mouthed triteileia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Arcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



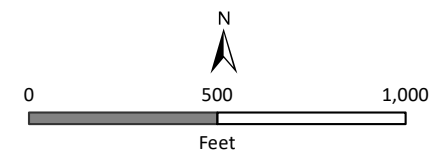
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 52)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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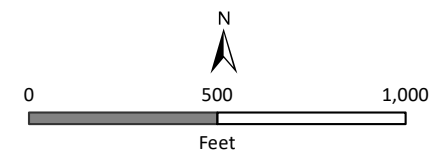
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 53)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

ANVI: Tall snapdragon  
ASCL: Cleveland's milk-vetch  
CACOOX: Mt. Saint Helena morning glory  
CAUN: Pink star-tulip  
CLGRTR: Tracy's clarkia  
CODI: Serpentine collomia  
COTEBR: Serpentine bird's beak  
DEUL: Swamp Larkspur  
EMU/MINU: Bare monkeyflower  
ERHE: Mt. Saint Helena fawn lily  
FRPU: Purdy's fritillary  
HEEX: Serpentine sunflower  
MOVI: Green monardella  
NACO: Cotula navarretia  
NAJE: Jepson's navarretia  
SECLCL: Cleveland's ragwort  
TOFO: Marsh zigadenus  
TRLU: Dark-mouthed triteleia





## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 54)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
- DEUL: Swamp Larkspur
- EMU/MINU: Bare monkeyflower
- ERHE: Mt. Saint Helena fawn lily
- FRPU: Purdy's fritillary
- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27000\27162-2\GIS\Wcmap\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



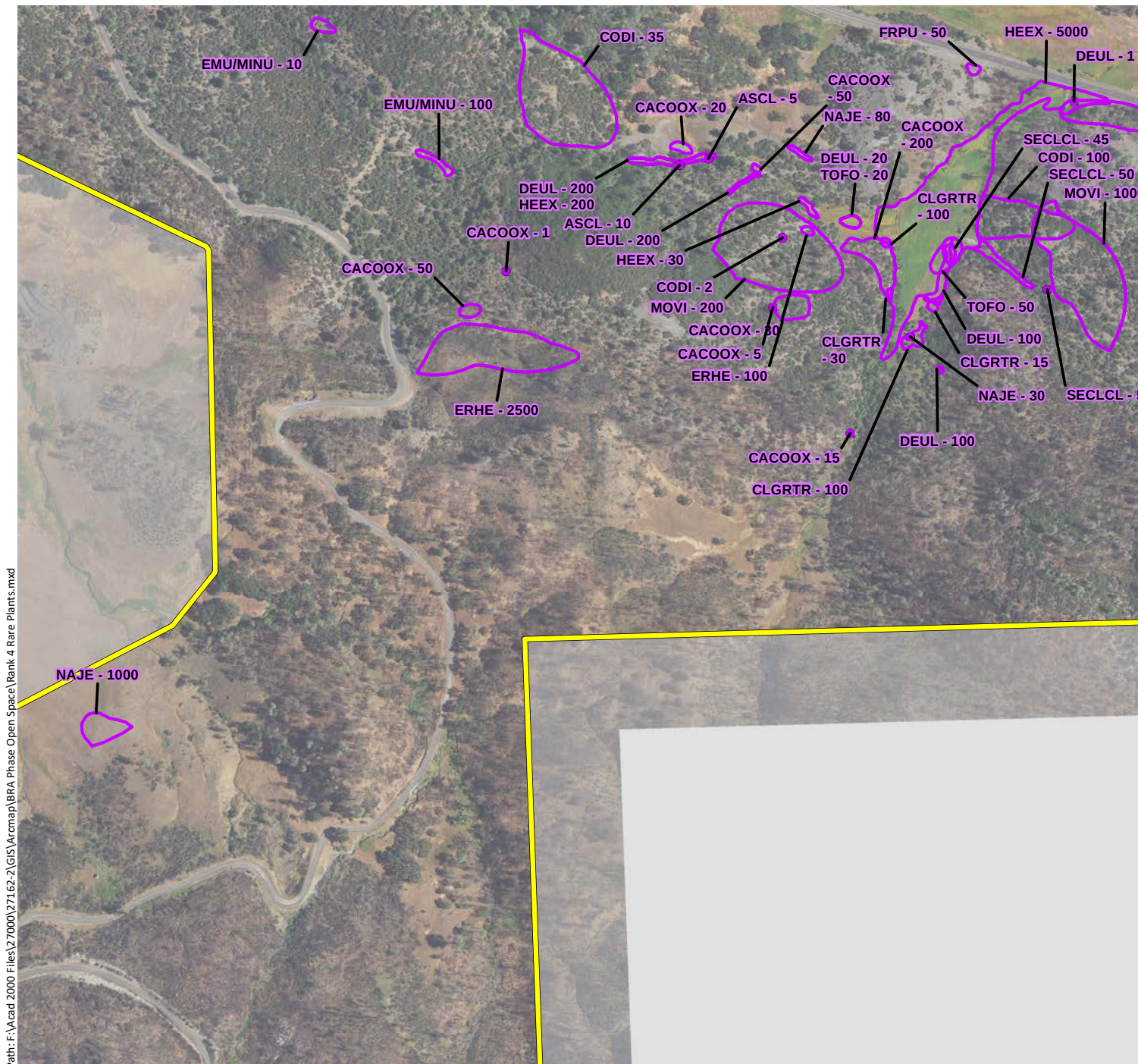
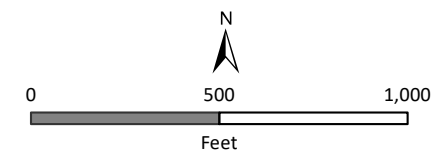
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 55)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
- CODI: Serpentine collomia
- COTEBR: Serpentine bird's beak
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- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



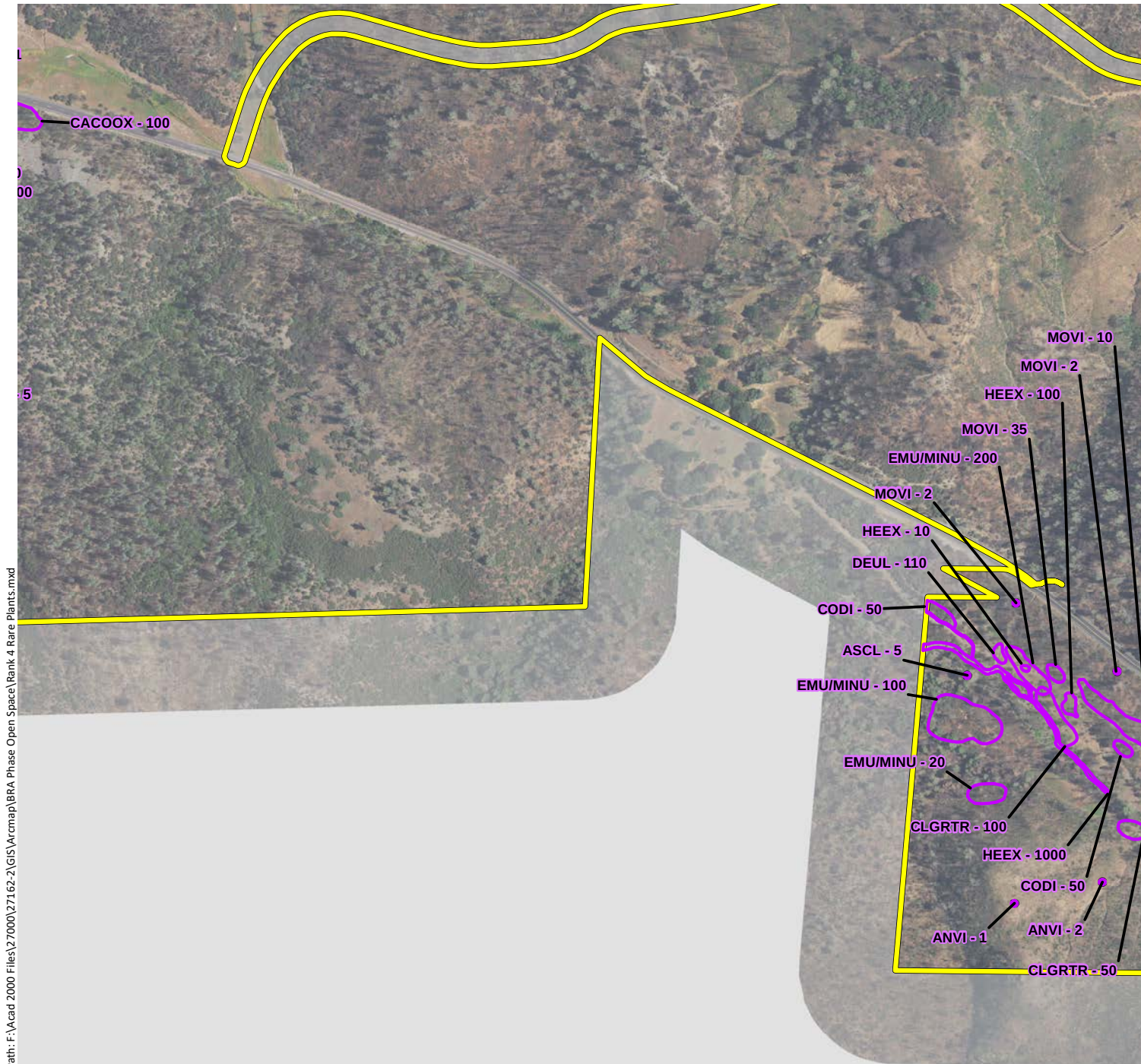
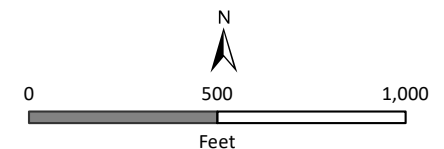
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 56)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
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- HEEX: Serpentine sunflower
- MOVI: Green monardella
- NACO: Cotula navarretia
- NAJE: Jepson's navarretia
- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed tritelesia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



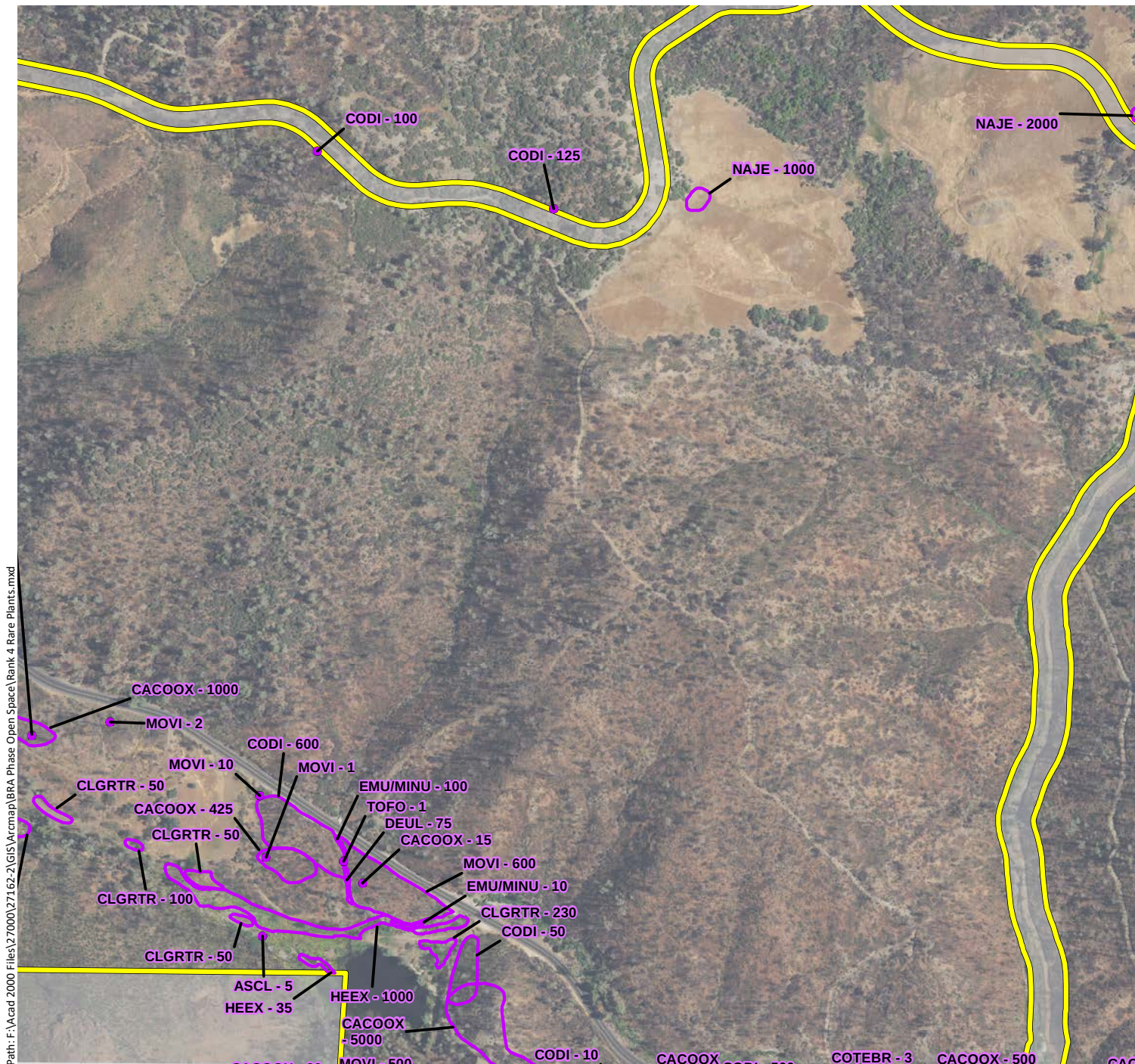
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 57)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
- CLGRTR: Tracy's clarkia
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- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



Path: F:\Acad 2000 Files\27162-2\GIS\Map\BRA Phase Open Space\Rank 4 Rare Plants.mxd

Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



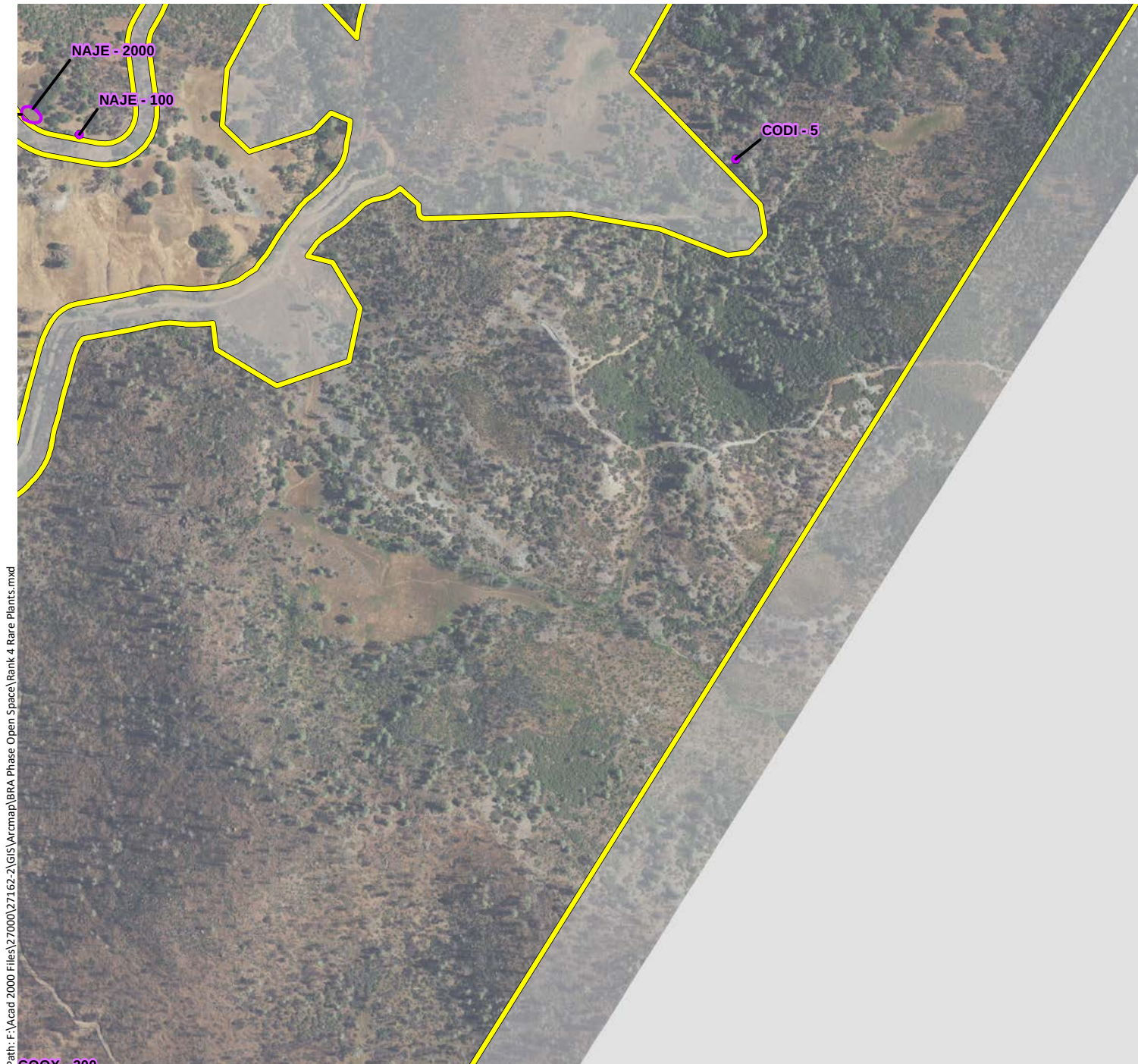
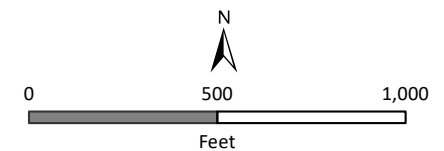
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 58)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
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- SECLCL: Cleveland's ragwort
- TOFO: Marsh zigadenus
- TRLU: Dark-mouthed triteleia



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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



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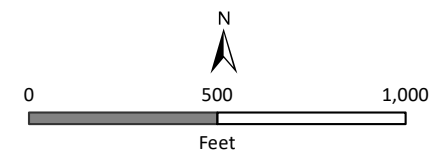
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 59)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
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## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 60)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

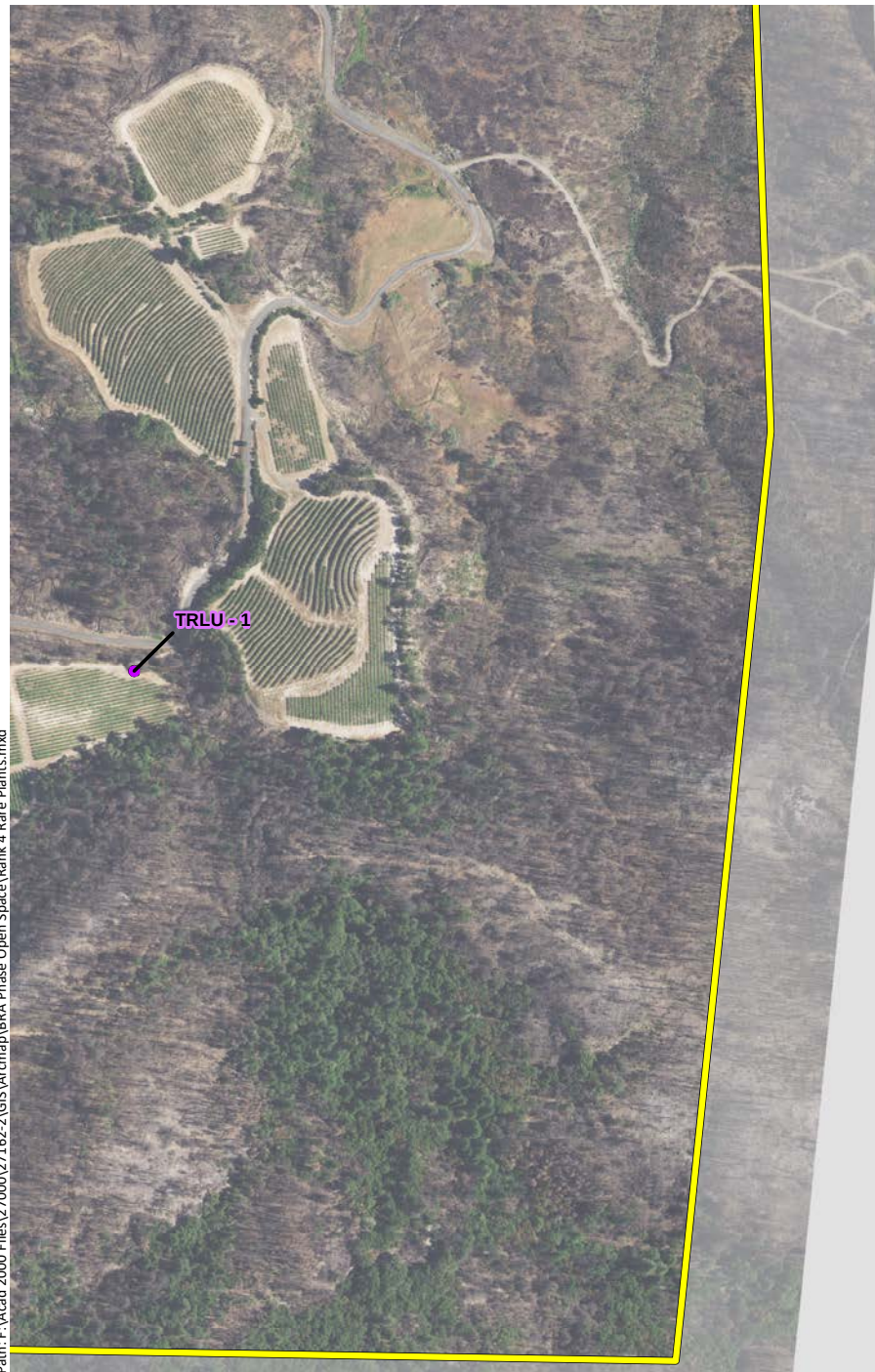
-  Phase 2 & Open Space Study Area - 11,549 ac.
-  CNPS Rank 4 Plants

### Key to Species Codes

- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
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Sources: 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019





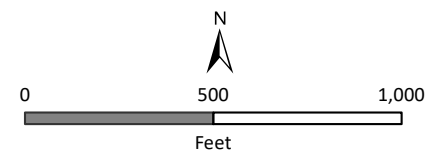
## Appendix E2. CNPS Rank 4 Special-Status Plant Species Observed within the Phase 2 and Open Space Study Area (Mapbook Sheet 61)

Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

- Phase 2 & Open Space Study Area - 11,549 ac.
- CNPS Rank 4 Plants

### Key to Species Codes

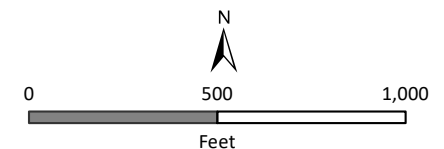
- ANVI: Tall snapdragon
- ASCL: Cleveland's milk-vetch
- CACOOX: Mt. Saint Helena morning glory
- CAUN: Pink star-tulip
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Maha Resort and Guenoc Valley  
Development, Phase 2 and Open Space

 CNPS Rank 4 Plants

ANVI: Tall snapdragon  
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**Sources:** 2016 Heaxagon Aerial, WRA | Prepared By: mrochelle, 6/28/2019



## **APPENDIX F**

### **LIST OF WILDLIFE SPECIES OBSERVED WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**





## Appendix F. List of Wildlife Species Observed within Guenoc Ranch

Surveys were conducted by WRA wildlife biologists between 2017 and 2019.

| Scientific Name                         | Common Name                | Conservation Status <sup>1</sup> |
|-----------------------------------------|----------------------------|----------------------------------|
| <b>Mammals</b>                          |                            |                                  |
| <i>Antrozous pallidus</i>               | Pallid bat                 | SSC WBWG High                    |
| <i>Canis latrans</i>                    | Coyote                     | -                                |
| <i>Dipodomys californicus</i>           | California kangaroo rat    | -                                |
| <i>Eptesicus fuscus</i>                 | Big brown bat              | -                                |
| <i>Geomyidae sp.</i>                    | Gopher sp.                 | -                                |
| <i>Lasionycteris noctivagans</i>        | Silver-haired bat          | WBWG Medium                      |
| <i>Lepus californicus</i>               | Black-tailed jackrabbit    | -                                |
| <i>Lynx rufus</i>                       | Bobcat                     | -                                |
| <i>Mephitis mephitis</i>                | Skunk                      | -                                |
| <i>Myotis californicus</i>              | California myotis          | -                                |
| <i>Myotis yumanensis</i>                | Yuma myotis                | -                                |
| <i>Odocoileus hemionus californicus</i> | California mule deer       | -                                |
| <i>Otospermophilus beecheyi</i>         | California ground squirrel | -                                |
| <i>Parastrellus hesperus</i>            | Canyon bat                 | -                                |
| <i>Procyon lotor</i>                    | Raccoon                    | -                                |
| <i>Sciurus griseus</i>                  | Western gray squirrel      | -                                |
| <i>Sciurus niger</i>                    | Eastern fox squirrel       | -                                |
| <i>Sus scrofa</i>                       | Feral pig                  | -                                |
| <i>Tadarida brasiliensis</i>            | Mexican free-tailed bat    | -                                |
| <b>Birds</b>                            |                            |                                  |
| <i>Accipiter cooperii</i>               | Cooper's hawk              | -                                |

| Scientific Name                  | Common Name            | Conservation Status <sup>1</sup> |
|----------------------------------|------------------------|----------------------------------|
| <i>Aechmophorus clarkii</i>      | Clark's grebe          | -                                |
| <i>Aechmophorus occidentalis</i> | Western grebe          | -                                |
| <i>Agelaius phoeniceus</i>       | Red-winged blackbird   | -                                |
| <i>Aimophila ruficeps</i>        | Rufous-crowned sparrow | -                                |
| <i>Aix sponsa</i>                | Wood duck              | -                                |
| <i>Anas platyrhynchos</i>        | Mallard                | -                                |
| <i>Anas strepera</i>             | Gadwall                | -                                |
| <i>Aphelocoma californica</i>    | California scrub-jay   | -                                |
| <i>Apodidae sp.</i>              | Swift sp.              | -                                |
| <i>Aquila chrysaetos</i>         | Golden eagle           | CFP, BCC                         |
| <i>Ardea herodias</i>            | Great blue heron       | -                                |
| <i>Baeolophus inornatus</i>      | Oak titmouse           | BCC                              |
| <i>Branta canadensis</i>         | Canada goose           | -                                |
| <i>Bubo virginianus</i>          | Great horned owl       | -                                |
| <i>Buteo jamaicensis</i>         | Red-tailed hawk        | -                                |
| <i>Buteo lineatus</i>            | Red-shouldered hawk    | -                                |
| <i>Butorides virescens</i>       | Green heron            | -                                |
| <i>Callipepla californica</i>    | California quail       | -                                |
| <i>Calypte anna</i>              | Anna's hummingbird     | -                                |
| <i>Cathartes aura</i>            | Turkey vulture         | -                                |
| <i>Charadrius vociferus</i>      | Killdeer               | -                                |
| <i>Chondestes grammacus</i>      | Lark sparrow           | -                                |
| <i>Circus cyaneus</i>            | Northern harrier       | SSC                              |
| <i>Cistothorus palustris</i>     | Marsh wren             | -                                |
| <i>Colaptes auratus</i>          | Northern flicker       | -                                |



| Scientific Name                 | Common Name               | Conservation Status <sup>1</sup> |
|---------------------------------|---------------------------|----------------------------------|
| <i>Columba livia</i>            | Rock pigeon               | -                                |
| <i>Corvus brachyrhynchos</i>    | American crow             | -                                |
| <i>Corvus corax</i>             | Common raven              | -                                |
| <i>Elanus leucurus</i>          | White-tailed kite         | CFP                              |
| <i>Eremophila alpestris</i>     | Horned lark               | -                                |
| <i>Euphagus cyanocephalus</i>   | Brewer's blackbird        | -                                |
| <i>Falco peregrinus</i>         | Peregrine falcon          | CFP, BCC                         |
| <i>Falco sparverius</i>         | American kestrel          | -                                |
| <i>Falco spp.</i>               | Falcon                    | -                                |
| <i>Geothlypis trichas</i>       | Common yellowthroat       | -                                |
| <i>Haemorhous mexicanus</i>     | House finch               | -                                |
| <i>Haliaeetus leucocephalus</i> | Bald eagle                | SE, CFP, BCC                     |
| <i>Hirundo rustica</i>          | Barn swallow              | -                                |
| <i>Junco hyemalis</i>           | Dark-eyed junco           | -                                |
| <i>Megaceryle alcyon</i>        | Belted kingfisher         | -                                |
| <i>Megascops kennicottii</i>    | Western screech owl       | -                                |
| <i>Melanerpes formicivorus</i>  | Acorn woodpecker          | -                                |
| <i>Meleagris gallopavo</i>      | Wild turkey               | -                                |
| <i>Melospiza melodia</i>        | Song sparrow              | -                                |
| <i>Melospiza crissalis</i>      | California towhee         | -                                |
| <i>Mimus polyglottos</i>        | Northern mockingbird      | -                                |
| <i>Myiarchus cinerascens</i>    | Ash-throated flycatcher   | -                                |
| <i>Nycticorax nycticorax</i>    | Black-crowned night heron | -                                |
| <i>Pandion haliaetus</i>        | Osprey                    | -                                |
| <i>Petrochelidon pyrrhonota</i> | Cliff swallow             | -                                |

| Scientific Name                   | Common Name                   | Conservation Status <sup>1</sup> |
|-----------------------------------|-------------------------------|----------------------------------|
| <i>Phalacrocorax auritus</i>      | Double-crested cormorant      | -                                |
| <i>Phalaenoptilus nuttallii</i>   | Common poorwill               | -                                |
| <i>Picoides nuttallii</i>         | Nuttall's woodpecker          | BCC                              |
| <i>Podilymbus podiceps</i>        | Pied-billed grebe             | -                                |
| <i>Poecile rufescens</i>          | Chestnut-backed chickadee     | -                                |
| <i>Psaltirparus minimus</i>       | Bushtit                       | -                                |
| <i>Quiscalus mexicanus</i>        | Great-tailed grackle          | -                                |
| <i>Sayornis nigricans</i>         | Black phoebe                  | -                                |
| <i>Selasphorus sasin</i>          | Allen's hummingbird           | BCC                              |
| <i>Setophaga petechia</i>         | Yellow warbler                | SSC, BCC                         |
| <i>Setophaga townsendi</i>        | Townsend's warbler            | -                                |
| <i>Sialia mexicana</i>            | Western bluebird              | -                                |
| <i>Sitta carolinensis</i>         | White-breasted nuthatch       | -                                |
| <i>Sphyrapicus ruber</i>          | Red-breasted sapsucker        | -                                |
| <i>Spinus psaltria</i>            | Lesser goldfinch              | -                                |
| <i>Spinus tristis</i>             | American goldfinch            | -                                |
| <i>Stelgidopteryx serripennis</i> | Northern rough-winged swallow | -                                |
| <i>Streptopelia decaocto</i>      | Eurasian collared-dove        | -                                |
| <i>Sturnella sp.</i>              | Meadow lark                   | -                                |
| <i>Sturnella neglecta</i>         | Western meadowlark            | -                                |
| <i>Sturnus vulgaris</i>           | European starling             | -                                |
| <i>Tachycineta bicolor</i>        | Tree swallow                  | -                                |
| <i>Tachycineta thalassina</i>     | Violet green swallow          | -                                |
| <i>Thryomanes bewickii</i>        | Bewick's wren                 | -                                |
| <i>Troglodytes aedon</i>          | House wren                    | -                                |



| Scientific Name                        | Common Name                 | Conservation Status <sup>1</sup> |
|----------------------------------------|-----------------------------|----------------------------------|
| <i>Turdus migratorius</i>              | American robin              | -                                |
| <i>Tringa melanoleuca</i>              | greater yellowlegs          | -                                |
| <i>Tyrannus verticalis</i>             | Western kingbird            | -                                |
| <i>Tyto alba</i>                       | Barn owl                    | -                                |
| <i>Xanthocephalus xanthocephalus</i>   | Yellow-headed blackbird     | SSC                              |
| <i>Zenaida macroura</i>                | Mourning dove               | -                                |
| <b>Reptiles and Amphibians</b>         |                             |                                  |
| <i>Actinemys marmorata</i>             | Western pond turtle         | SSC                              |
| <i>Anaxyrus boreas</i>                 | Western toad                | -                                |
| <i>Lampropeltis getula californiae</i> | California kingsnake        | -                                |
| <i>Lithobates catesbeianus</i>         | American bullfrog           | -                                |
| <i>Pituophis catenifer</i>             | Gopher snake                | -                                |
| <i>Plestiodon skiltonianus</i>         | Western skink               | -                                |
| <i>Pseudacris regilla</i>              | Pacific tree frog           | -                                |
| <i>Pseudacris sierra</i>               | Sierran treefrog            | -                                |
| <i>Rana boylei</i>                     | Foothill yellow-legged frog | SC, SSC                          |
| <i>Sceloporus occidentalis</i>         | Western fence lizard        | -                                |
| <i>Taricha granulosa</i>               | Rough-skinned newt          | -                                |
| <i>Thamnophis sirtalis</i>             | Common garter snake         | -                                |
| <b>Fishes</b>                          |                             |                                  |
| <i>Catostomus occidentalis</i>         | Sacramento sucker           | -                                |
| <i>Cyprinus carpio</i>                 | Common carp                 | -                                |
| <i>Gambusia affinis</i>                | Western mosquitofish        | -                                |
| <i>Lavinia symmetricus symmetricus</i> | Central California roach    | -                                |
| <i>Lepomis cyanellus</i>               | Green sunfish               | -                                |

| Scientific Name                 | Common Name                    | Conservation Status <sup>1</sup> |
|---------------------------------|--------------------------------|----------------------------------|
| <i>Lepomis macrochirus</i>      | Bluegill                       | -                                |
| <i>Micropterus dolomieu</i>     | Smallmouth bass                | -                                |
| <i>Micropterus salmoides</i>    | Largemouth bass                | -                                |
| <i>Oncorhynchus mykiss</i>      | Rainbow trout                  | -                                |
| <i>Ptychocheilus grandis</i>    | Sacramento pikeminnow          | -                                |
| <b>Invertebrates</b>            |                                |                                  |
| <i>Euphydryas chalcedona</i>    | Variable checkerspot butterfly | -                                |
| <i>Junonia coenia</i>           | Buckeye butterfly              | -                                |
| <i>Lethocerus americanus</i>    | Giant water bug                | -                                |
| <i>Pacifastacus leniusculus</i> | Signal crayfish                | -                                |
| <i>Papilio zelicaon</i>         | Anise swallowtail butterfly    | -                                |
| <i>Pieris rapae</i>             | Cabbage white butterfly        | -                                |
| <i>Vanessa cardui</i>           | Painted lady butterfly         | -                                |

<sup>1</sup>**Key to Conservation Status:**

|      |                                     |
|------|-------------------------------------|
| SC   | State Candidate                     |
| SE   | State Endangered                    |
| CFP  | CDFW Fully Protected Animal         |
| SSC  | CDFW Species of Special Concern     |
| BCC  | USFWS Birds of Conservation Concern |
| WBWG | Western Bat Working Group           |



## **APPENDIX G**

### **POTENTIAL SPECIAL-STATUS WILDLIFE SPECIES TO OCCUR WITHIN THE PHASE 2/OPEN SPACE STUDY AREA**





## Appendix G. Potential for Special-Status Wildlife Species to occur within the Phase 2 and Open Space Study Area

List compiled from database searches focused on the following 7.5-minute USGS quadrangles: Aetna Springs, Calistoga, Chiles Valley, Clearlake Highlands, Detert Reservoir, Glascock Mountain, Jericho Valley, Knoxville, Lower Lake, Mark West Springs, Middletown, Mount St. Helena, St. Helena, Walter Springs, Whispering Pines, and Wilson Valley USGS 7.5' quadrangles (CDFW 2019a; USFWS 2019). List also compiled by a review of other CDFW and USFWS lists and publications (Tomson et al. 2016, Shuford and Gardali 2008, Moyle et al. 2015, USFWS 2008, Bolster 1998, WBWG 2019) focused on the region.

| Species                                                  | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                                                                                                          | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                | Recommendations                                               |
|----------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <b>Mammals</b>                                           |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                      |                                                               |
| Pallid bat<br><i>Antrozous pallidus</i>                  | SSC, WBWG                        | Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Sensitive to disturbance of roosting sites.                              | <b>Present.</b> This species was documented on the property in 2018. The Phase 2 and Open Space Study Area contains shrubland, forested habitats, rocky outcroppings, chaparral, and agricultural areas that may support this species. Stream, riparian, and grassland boarding open water provide foraging for this species.        | Recommendations for this species can be found in Section 6.4. |
| Ring-tailed cat (Ringtail)<br><i>Bassariscus astutus</i> | CFP                              | Widely distributed throughout most of California, absent from some portions of the Central Valley and northeastern California. Found in a variety of habitats throughout the western US including riparian areas, semi-arid country, deserts, chaparral, oak woodlands, pinyon pine woodlands, juniper woodlands and montane conifer forests usually under 1400m in elevation. Typically uses cliffs or large trees for shelter. | <b>Moderate Potential.</b> Oak woodland, riparian, scrub and chaparral within the Phase 2 and Open Space Study Area provide potentially suitable habitat for this species. Additionally, the property is within a greater area that is largely undeveloped and densely vegetated that may provide suitable habitat for this species. | Recommendations for this species can be found in Section 6.4. |

| Species                                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                         | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                           | Recommendations                                               |
|------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Townsend's big-eared bat<br><i>Corynorhinus townsendii</i> | SSC, WBWG                        | This species is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.                            | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains mixed forest and many water features which provide foraging habitat. There are also many occurrences of this species within five miles of the Phase 2 and Open Space Study Area (CDFW 2019a).                                                                                                                             | Recommendations for this species can be found in Section 6.4. |
| Silver-haired bat<br><i>Lasionycteris noctivagans</i>      | WBWG                             | Primarily a forest dweller, feeding over streams, ponds, and open brushy areas. Summer habitats include a variety of forest and woodland types, both coastal and montane. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.                                                                                       | <b>Present.</b> This species was detected on the property during surveys in 2018. The Phase 2 and Open Space Phase 2 and Open Space Study Area contains woodland, forest, riparian and open habitat suitable for this species. The Phase 2 and Open Space Phase 2 and Open Space Study Area could support roosting in hollow trees, snags, and rock crevices. Phase 2 and Open Space Study Area | Recommendations for this species can be found in Section 6.4. |
| Western red bat<br><i>Lasiurus blossevillii</i>            | SSC, WBWG                        | This species is highly migratory and is typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. | <b>Moderate Potential.</b> This species has not been documented within 10 miles of the property (CDFW 2019a). However, the Phase 2 and Open Space Study Area contains broad-leaved tree species typically associated with this species. Stream channel, riparian, open water and edge habitats provide suitable foraging habitat for this species.                                              | Recommendations for this species can be found in Section 6.4. |
| Hoary bat<br><i>Lasiurus cinereus</i>                      | WBWG                             | Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.                                                                                                                      | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains forested habitats and habitat mosaics, with large pine and oak trees throughout. Grassland bordering open water and edge habitats along forested areas provide foraging for this species.                                                                                                                                 | Recommendations for this species can be found in Section 6.4. |



| Species                                                                            | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                              | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                               | Recommendations                                               |
|------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Fisher, west coast DPS<br><i>Martes pennanti</i><br>[ <i>M. pennant pacifica</i> ] | SSC                              | Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Use cavities, snags, logs and rocky areas for cover and denning. Need large areas of mature, dense forest.                                                                                                                    | <b>No Potential.</b> The project does not contain suitable coniferous forest and is located outside of the species range.                                                                                                                                                                                           | No further actions are recommended for this species.          |
| Long-eared myotis<br><i>Myotis evotis</i>                                          | WBWG                             | Occurs in semiarid shrublands, sage, chaparral, and agricultural areas, but is usually associated with coniferous forests from sea level to 9000 feet. Individuals roost under exfoliating tree bark, and in hollow trees, caves, mines, cliff crevices, and rocky outcrops on the ground. They also sometimes roost in buildings and under bridges. | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains shrubland, forested habitats, rocky outcroppings, chaparral, and agricultural areas that are typically associated with the species. Grassland boarding open water and edge habitats along forested areas provide foraging for this species.   | Recommendations for this species can be found in Section 6.4. |
| Fringed myotis<br><i>Myotis thysanodes</i>                                         | WBWG                             | Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Buildings, mines and large trees and snags are important day and night roosts.                                                                                                                         | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains dry woodland and grassland habitat that could provide suitable foraging for this species. Buildings and trees within the Phase 2 and Open Space Study Area could also provide suitable roosting habitat for this species.                 | Recommendations for this species can be found in Section 6.4. |
| Long-legged myotis<br><i>Myotis volans</i>                                         | WBWG                             | Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings.                                                                                                                        | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains dry woodland and grassland habitat that could provide suitable foraging for this species. Buildings, rock crevices, and trees within the Phase 2 and Open Space Study Area could also provide suitable roosting habitat for this species. | Recommendations for this species can be found in Section 6.4. |

| Species                                             | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                               | Recommendations                                               |
|-----------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| American badger<br><i>Taxidea taxus</i>             | SSC                              | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.                                                                                                               | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains, and is surrounded by, large expanses of uncultivated open ground with shrub, grassland, and forest habitat. Burrowing rodents were observed within the Phase 2 and Open Space Study Area, which may support a prey base for the species. | Recommendations for this species can be found in Section 6.4. |
| <b>Birds</b>                                        |                                  |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                     |                                                               |
| Tricolored blackbird<br><i>Agelaius tricolor</i>    | BCC, SSC, ST                     | Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential. | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains several reservoirs with sufficient emergent vegetation to support nesting by this species. This species has been documented nesting within 1 mile of the property (CDFW 2019a).                                                               | Recommendations for this species can be found in Section 6.4. |
| Grasshopper sparrow<br><i>Ammodramus savannarum</i> | SSC                              | Summer resident. Breeds in open grasslands, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.                                                                                                                                           | <b>High Potential.</b> The Phase 2 and Open Space Study Area is within this species' breeding range, and contains large areas of grasslands to support foraging and nesting (CDFW 2019a, eBird 2019). This species has been documented within 0.5 mile of the property (eBird 2019).                                | Recommendations for this species can be found in Section 6.4. |
| Golden eagle<br><i>Aquila chrysaetos</i>            | BCC, CFP                         | Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.                                                                          | <b>Present.</b> This species was observed nesting just south of the property in 2018. Adult and juvenile golden eagles were observed in oak woodland communities within the property. The Phase 2 and Open Space Study Area contains suitable open areas with large trees to support nesting and foraging.          | Recommendations for this species can be found in Section 6.4. |



| Species                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                               | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Recommendations                                               |
|--------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Short-eared owl<br><i>Asio flammeus</i>    | SSC                              | Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles. | <b>Unlikely.</b> The Phase 2 and Open Space Study Area contains suitable grassland foraging habitat for this species, which may winter there. However, this species is a rare breeder in interior California (CDFW 2019a, eBird 2019).                                                                                                                                                                                                                                                                                                                                                                                                                 | No further actions are recommended for this species.          |
| Long-eared owl<br><i>Asio otus</i>         | SSC                              | Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.                                     | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains oak and riparian habitats adjacent to open lands that could support foraging and nesting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Recommendations for this species can be found in Section 6.4. |
| Burrowing owl<br><i>Athene cunicularia</i> | SSC, BCC                         | Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.                                | <b>Moderate Potential.</b> This species has not been documented breeding in Lake County (CDFW 2019a, eBird 2019). This species may occasionally winter within uncanopied grassland areas within the Phase 2 and Open Space Study Area with suitable burrows. This species has been documented wintering within 2 miles of the property (eBird 2019). Burrows suitable for burrowing owl occupation were observed in open grassland within the Phase 2 and Open Space Study Area. In addition, ground squirrels were observed throughout the Phase 2 and Open Space Study Area and additional suitable burrow habitat for owls may arise in the future. | Recommendations for this species can be found in Section 6.4. |

| Species                                           | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                          | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                  | Recommendations                                               |
|---------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Oak titmouse<br><i>Baeolophus inornatus</i>       | BCC                              | Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.                                                                                                                                   | <b>Present.</b> This species was observed within the woodland communities on the property in 2018 and 2019. The Phase 2 and Open Space Study Area contains woodland and tree cavities suitable for nesting by this species.            | Recommendations for this species can be found in Section 6.4. |
| Vaux's swift<br><i>Chaetura vauxi</i>             | SSC                              | Summer resident, breeding primarily in forested areas. Nests in tree cavities, favoring those with a large vertical extent; also uses chimneys and other man-made substrates. Forages aerially for insects.                                                      | <b>Unlikely.</b> The Phase 2 and Open Space Study Area does not contain the dense coniferous forest this species prefers, and is outside of the known breeding range of the species (CDFW 2019a).                                      | No further actions are recommended for this species.          |
| Northern harrier<br><i>Circus cyaneus</i>         | SSC                              | Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.               | <b>Present.</b> This species was observed foraging within the Phase 2 and Open Space Study Area in 2018. The Phase 2 and Open Space Study Area contains open grassland which may support nesting and foraging by this species.         | No further actions are recommended for this species.          |
| Olive-sided flycatcher<br><i>Contopus cooperi</i> | SSC, BCC                         | Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.                | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains woodland and riparian habitats that may support nesting.                                                                                                     | Recommendations for this species can be found in Section 6.4. |
| White-tailed kite<br><i>Elanus leucurus</i>       | CFP                              | Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates. | <b>Present.</b> This species was observed within the Phase 2 and Open Space Study Area in 2018. The Phase 2 and Open Space Study Area provides open foraging habitat for this species and large trees and shrubs suitable for nesting. | Recommendations for this species can be found in Section 6.4. |



| Species                                                     | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                       | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                    | Recommendations                                               |
|-------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Prairie falcon<br><i>Falco mexicanus</i>                    | BCC                              | Year-round resident and winter visitor. Inhabits dry, open terrains, including foothills and valleys. Breeding sites located on steep cliffs. Forages widely.                                                                                                                                                 | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains open areas and rocky cliffs that provide potential foraging and nesting habitat for this species.                                                                                                                                              | Recommendations for this species can be found in Section 6.4. |
| American peregrine falcon<br><i>Falco peregrinus anatum</i> | CFP, BCC                         | Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely. | <b>Present.</b> This species was observed nesting on exposed cliffs within the Phase 2 and Open Space Study Area in 2018. The Phase 2 and Open Space Study Area contains several reservoirs and rocky cliffs that provide potential foraging and nesting habitat for this species.                                       | Recommendations for this species can be found in Section 6.4. |
| Bald eagle<br><i>Haliaeetus leucocephalus</i>               | SE, CFP, BCC                     | Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.                                                        | <b>Present.</b> Adult and juvenile bald eagles were observed flying and roosting adjacent to multiple reservoirs within the Phase 2 and Open Space Study Area in 2018 and 2019. This species has been previously documented to nest within the Phase 2 and Open Space Study Area around McCreary Reservoir (CDFW 2019a). | Recommendations for this species can be found in Section 6.4. |
| Yellow-breasted chat<br><i>Icteria virens</i>               | SSC                              | Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow, blackberry, and wild grape.                                                                                                                                 | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains riparian areas with dense vegetation to support nesting, and this species has been documented approximately 3 miles south of the Phase 2 and Open Space Study Area (eBird 2019).                                                               | Recommendations for this species can be found in Section 6.4. |
| Least bittern<br><i>Ixobrychus exilis</i>                   | SSC, BCC                         | Summer resident primarily in portions of the Central Valley and southern California. Typically breeds in deeper freshwater marshes with dense emergent and woody vegetation.                                                                                                                                  | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains several deep reservoirs with emergent vegetation.                                                                                                                                                                                              | Recommendations for this species can be found in Section 6.4. |

| Species                                           | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                      | Recommendations                                               |
|---------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Loggerhead shrike<br><i>Lanius ludovicianus</i>   | BCC, SSC                         | Year-round resident in open woodland, grassland, savannah and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely-foliaged shrubs or trees. | <b>High Potential.</b> The Phase 2 and Open Space Study Area provides open areas for foraging as well as suitably dense vegetation in scrub and woodland communities to support nesting. This species has been documented within 1.5 miles of the property (eBird 2019).                                                   | Recommendations for this species can be found in Section 6.4. |
| Lewis's woodpecker<br><i>Melanerpes lewis</i>     | BCC                              | Uncommon resident in California occurring on open oak savannahs, broken deciduous and coniferous habitats. Breeds primarily in ponderosa pine forests, riparian woodlands and disturbed pine forests but is also known to nest in orchards and oak woodlands.               | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains oak savannah and woodland habitat to support this species, and the Phase 2 and Open Space Study Area is within the known breeding range of this species. This species has been documented within the Phase 2 and Open Space Study Area (eBird 2019). | Recommendations for this species can be found in Section 6.4. |
| Flammulated owl<br><i>Otus flammeolus</i>         | BCC                              | Nesting habitat includes multi-age class stands with multiple canopy layers, including a veteran tree component for nesting and roosting. Secondary cavity nester, utilizing natural cavities or those excavated by woodpeckers.                                            | <b>Unlikely.</b> The Phase 2 and Open Space Study Area does not contain dense canopied-coniferous forest habitat that this species prefers, and this species is not known to inhabit eastern Lake County.                                                                                                                  | No further actions are recommended for this species.          |
| Nuttall's woodpecker<br><i>Picoides nuttallii</i> | BCC                              | Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.                                                                           | <b>Present.</b> This species was observed within the woodland communities in the Phase 2 and Open Space Study Area in 2018. The Phase 2 and Open Space Study Area contains woodland and tree cavities suitable for nesting.                                                                                                | Recommendations for this species can be found in Section 6.4. |
| Purple martin<br><i>Progne subis</i>              | SSC                              | Inhabits woodlands and low elevation coniferous forests. Nests in old woodpecker cavities and human-made structures. Nest is often located in tall, isolated tree or snag.                                                                                                  | <b>High Potential.</b> The Phase 2 and Open Space Study Area contains woodlands with snags and cavities to support nesting, and this species has been documented to nest within the Phase 2 and Open Space Study Area (CDFW 2019a).                                                                                        | Recommendations for this species can be found in Section 6.4. |



| Species                                                           | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                              | Recommendations                                               |
|-------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Bank swallow<br><i>Riparia riparia</i>                            | ST                               | Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co. | <b>Unlikely.</b> The Phase 2 and Open Space Study Area is outside of the breeding range for this species. There are no documented sightings of this species within 12 miles of the Phase 2 and Open Space Study Area (CDFW 2019a). | No further actions are recommended for this species.          |
| Allen's hummingbird<br><i>Selasphorus sasin</i>                   | BCC                              | Summer resident along the California coast, breeding in a variety of woodland and forest habitats, including parks and gardens with abundant nectar sources. Nest in shrubs and trees with dense vegetation.                                                                                                                                                                                                                                                                                              | <b>Present.</b> This species was observed within the property during site assessments in 2018. The Phase 2 and Open Space Study Area contains woodland and riparian habitats with nectar sources that may support nesting.         | Recommendations for this species can be found in Section 6.4. |
| Yellow warbler<br><i>Setophaga [Dendroica] petechia brewsteri</i> | SSC, BCC                         | Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.                                                                                                                                                                                                                                                                   | <b>Present.</b> This species was observed in the property in 2018. The Phase 2 and Open Space Study Area contains riparian areas with dense vegetation to support nesting.                                                         | Recommendations for this species can be found in Section 6.4. |
| Lawrence's goldfinch<br><i>Spinus [Carduelis] lawrencei</i>       | BCC                              | Summer resident; generally uncommon and local. Typically found in arid open woodlands, including oak savannah. Breeding distribution is erratic from year to year.                                                                                                                                                                                                                                                                                                                                        | <b>Moderate Potential.</b> The Phase 2 and Open Space Study Area contains undisturbed oak savannah, which provides breeding habitat for this species.                                                                              | Recommendations for this species can be found in Section 6.4. |
| Black-chinned sparrow<br><i>Spizella atrogularis</i>              | BCC                              | Prefers sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, and similar brushy habitats. Often on arid, south-facing slopes with ceanothus, manzanita, sagebrush, and chamise.                                                                                                                                                                                                                                                                                                      | <b>High Potential.</b> The property is within this species' breeding range, and the Phase 2 and Open Space Study Area contains dense shrub and chaparral habitats this species requires for nesting (eBird 2019).                  | Recommendations for this species can be found in Section 6.4. |

| Species                                                         | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                    | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                            | Recommendations                                               |
|-----------------------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Northern spotted owl<br><i>Strix occidentalis caurina</i>       | FT, ST, SSC                      | Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. . Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.                                                                              | <b>No Potential.</b> The Phase 2 and Open Space Study Area does not contain the dense, old growth coniferous forest this species prefers. The nearest documented occurrence of this species is near Robert Louis Stevenson State Park, 5 miles southwest of the property (CDFW 2019a).                                                                                                           | No further actions are recommended for this species.          |
| Yellow-headed blackbird<br><i>Xanthocephalus xanthocephalus</i> | SSC                              | Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.                                | <b>Present.</b> This species was observed nesting in emergent vegetation within the Phase 2 and Open Space Study Area in 2018 and 2019.                                                                                                                                                                                                                                                          | Recommendations for this species can be found in Section 6.4. |
| <b>Reptiles and Amphibians</b>                                  |                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                  |                                                               |
| Western pond turtle<br><i>Actinemys marmorata</i>               | SSC                              | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying. | <b>Present.</b> The species was observed within portions of Bucksnot Creek in 2018. The various streams and large open-water reservoirs within the property provide suitable aquatic habitat, and the open grasslands adjacent to these features may support nesting. This species has also been documented in CNDDDB within the Phase 2 and Open Space Study Area (CDFW 2019a).                 | Recommendations for this species can be found in Section 6.4. |
| California giant salamander<br><i>Dicamptodon ensatus</i>       | SSC                              | Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.            | <b>Unlikely.</b> The Phase 2 and Open Space Study Area does not contain suitable coniferous forest typical of the species habitat requirements. Streams in the Phase 2 and Open Space Study Area are suboptimal to unsuitable for this species with warm summer water temperatures and non-native predatory fish and bullfrogs. The property is also located outside of the species known range. | No further actions are recommended for this species.          |



| Species                                             | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                                                  | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Recommendations                                               |
|-----------------------------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Foothill yellow-legged frog<br><i>Rana boylei</i>   | SSC, SC                          | Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.                                                                  | <b>Present.</b> The species was observed within the property in 2018 in association with Butts Creek. Other potentially suitable streams were observed throughout the Phase 2 and Open Space Study Area. Perennial streams with rocky substrate provide suitable habitat for the species, including both Butts Creek and Putah Creek. This species has also been documented in CNDDDB within the property (CDFW 2019a).                                                                                                                                                                                                                         | Recommendations for this species can be found in Section 6.4. |
| California red-legged frog<br><i>Rana draytonii</i> | FT, SSC                          | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains. | <b>Unlikely.</b> Focused surveys for the species were conducted within the property in 2018 and 2019 and found no individuals. Aquatic habitat features within the Phase 2 and Open Space Study Area are dominated by several non-native predators including bass, sunfish, American bullfrog, and crayfish. There are no CNDDDB occurrences of the species within 10-miles of the site. Due to the lack of detections during focused nighttime surveys, non-native predator dominated aquatic habitat, and absence of nearby documented occurrences, it is unlikely that the species would occur within the Phase 2 and Open Space Study Area. | No further actions are recommended for this species.          |
| Red-bellied newt<br><i>Taricha rivularis</i>        | SSC                              | Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest provides typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flow.                                         | <b>Unlikely.</b> The Phase 2 and Open Space Study Area does not contain suitable coastal redwood or hardwood forest typical of the species habitat requirements. The property is also located outside of the species known range.                                                                                                                                                                                                                                                                                                                                                                                                               | No further actions are recommended for this species.          |

| Species                                                      | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                   | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                               | Recommendations                                      |
|--------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Fishes</b>                                                |                                  |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                     |                                                      |
| Pacific lamprey<br><i>Entosphenus [Lampetra] tridentatus</i> | SSC                              | Spawns between March and July in gravel bottomed streams in riffle habitat. Larvae drift downstream to areas of low velocity and fine substrates and are relatively immobile in the stream substrates.                                                    | <b>No Potential.</b> The property does not contain anadromous aquatic habitat necessary to support this species. The property is within the upper Putah Creek Watershed that drains into Lake Berryessa, which forms a complete fish passage barrier for fish returning from the ocean and blocks this species from the Phase 2 and Open Space Study Area.                          | No further actions are recommended for this species. |
| Clear Lake tule perch<br><i>Hysterocarpus traski lagunae</i> | SSC                              | Occurs in low elevation streams of the Russian River system. Requires clear, flowing water with abundant cover and deep (> 1 m) pools.                                                                                                                    | <b>Unlikely.</b> The property is within the upper Putah Creek Watershed that drains into Lake Berryessa. This species is only known for Clear Lake and associated tributaries; which is outside of the Phase 2 and Open Space Study Area. Tule perch is not known for the upper Putah Creek Watershed.                                                                              | No further actions are recommended for this species. |
| Russian River tule perch<br><i>Hysterocarpus traski pomo</i> | SSC                              | Occurs in low elevation streams of the Russian River system. Requires clear, flowing water with abundant cover and deep (> 1 m) pools.                                                                                                                    | <b>Unlikely.</b> The property is within the upper Putah Creek Watershed that drains into Lake Berryessa. This species is only known for the Russian River and its tributaries; which is outside of the Phase 2 and Open Space Study Area.                                                                                                                                           | No further actions are recommended for this species. |
| River lamprey<br><i>Lampetra ayresi</i>                      | SSC                              | Lower Sacramento River, San Joaquin River and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles, Ammocoetes need sandy backwaters or stream edges, good water quality and temps < 25 degrees C. | <b>No Potential.</b> The Phase 2 and Open Space Study Area does not contain anadromous aquatic habitat necessary to support this species. The property is within the upper Putah Creek Watershed that drains into Lake Berryessa, which forms a complete fish passage barrier for fish returning from the ocean and blocks this species from the Phase 2 and Open Space Study Area. | No further actions are recommended for this species. |



| Species                                                                         | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                      | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Recommendations                                      |
|---------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Clear Lake hitch<br><i>Lavinia exilicauda chi</i>                               | ST, SSC                          | Found only in Clear Lake, Lake County, and associated ponds. Spawns in streams flowing into Clear Lake. Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.                                                                                                  | <b>Unlikely.</b> The property is within the upper Putah Creek Watershed that drains into Lake Berryessa. This species is only known for Clear Lake and associated tributaries; which is outside of the property.                                                                                                                                                                                                                                                                                                               | No further actions are recommended for this species. |
| Clear Lake – Russian River roach<br><i>Lavinia symmetricus</i><br><i>ssp. 4</i> | SSC                              | Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.                                                                                                                                                                                                                               | <b>Unlikely.</b> The Phase 2 and Open Space Study Area is within the upper Putah Creek Watershed that drains into Lake Berryessa. This species is only known for Clear Lake and associated tributaries; which is outside of the Phase 2 and Open Space Study Area. Roach in the Phase 2 and Open Space Study Area are within the range and distribution of Central California roach, which are not a special-status species.                                                                                                   | No further actions are recommended for this species. |
| Navarro roach<br><i>Lavinia symmetricus</i><br><i>navarroensis</i>              | SSC                              | Occurs only in the Navarro River and its tributaries. Adaptable; found in warm, intermittent streams as well as cold, well-aerated streams.                                                                                                                                                                                  | <b>Unlikely.</b> The property is within the upper Putah Creek Watershed that drains into Lake Berryessa. This species is only known for the Navarro River and its tributaries; which is outside of the property.                                                                                                                                                                                                                                                                                                               | No further actions are recommended for this species. |
| Coho salmon - central CA coast ESU<br><i>Oncorhynchus kisutch</i>               | FE, SE                           | Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen. | <b>No Potential.</b> This species is considered extirpated from San Francisco Bay and associated tributaries, including the greater Sacramento River Watershed. The Phase 2 and Open Space Study Area does not contain anadromous aquatic habitat necessary to support this species. The property is within the upper Putah Creek Watershed that drains into Lake Berryessa, which forms a complete fish passage barrier for fish returning from the ocean and blocks this species from the Phase 2 and Open Space Study Area. | No further actions are recommended for this species. |

| Species                                                                    | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                                                                                  | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Recommendations                                      |
|----------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Steelhead - Central Valley DPS<br><i>Oncorhynchus mykiss</i>               | FT                               | Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.                                            | <b>Unlikely.</b> The Phase 2 and Open Space Study Area does not contain anadromous aquatic habitat necessary to support this species. The property is within the upper Putah Creek Watershed that drains into Lake Berryessa, which forms a complete fish passage barrier for fish returning from the ocean and blocks this species from the Phase 2 and Open Space Study Area. The resident form, rainbow trout, is known to occur in Lake Berryessa and may utilize portions of upper Putah Creek and associated tributaries that are within the Phase 2 and Open Space Study Area. Rainbow trout was observed within Butts Creek in 2018. However, the resident form of the species is not protected as a steelhead in areas where anadromy is blocked, such as the waters within the Phase 2 and Open Space Study Area. | No further actions are recommended for this species. |
| Chinook salmon - California coastal ESU<br><i>Oncorhynchus tshawytscha</i> | FT                               | California Coastal Chinook Salmon ESU includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive). Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 degrees C lethal to adults. | <b>No Potential.</b> The Phase 2 and Open Space Study Area does not contain anadromous aquatic habitat necessary to support this species. The property is within the upper Putah Creek Watershed that drains into Lake Berryessa, which forms a complete fish passage barrier for fish returning from the ocean and blocks this species from the Phase 2 and Open Space Study Area.                                                                                                                                                                                                                                                                                                                                                                                                                                         | No further actions are recommended for this species. |



| Species                                                      | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                                     | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                             | Recommendations                                      |
|--------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Invertebrates</b>                                         |                                  |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |
| Crotch bumble bee<br><i>Bombus crotchii</i>                  | SC                               | Crotch bumble bee occurs primarily in the Mediterranean region, pacific coast, western desert, and great valley of southwestern California. Populations used to extend through the southern two-thirds of California, but is now absent through much of its historic range. | <b>Unlikely.</b> The property is north of this species current range.                                                                                                                                                                                                                                                                                                                                             | No further actions are recommended for this species. |
| Western bumblebee<br><i>Bombus occidentalis</i>              | SC                               | Once widespread in the western United States and Canada, populations of this insect have drastically declined in recent decades. Pollinates a variety of wild flowering plants and crops.                                                                                   | <b>Unlikely.</b> Although this species historically occurred throughout California, recent studies have shown that the property is outside of this species current extent of occurrence.                                                                                                                                                                                                                          | No further actions are recommended for this species. |
| Conservancy fairy shrimp<br><i>Branchinecta conservation</i> | FE                               | Endemic to the grasslands of the northern two-thirds of the Central Valley, found in large, turbid pools. Inhabits astatic pools located in swales formed by old, braided alluvium, filled by winter/spring rains, lasting until June.                                      | <b>Unlikely.</b> Although there are vernal pools that are a part of the Lake-Napa Vernal Pool complex about 2 miles north west of the property, this species has not been documented in Lake County (CDFW 2019a, Erikson and Belk, 1999). Additionally, no vernal pools with soil and/or hydrological characteristics that could support this species were observed within the Phase 2 and Open Space Study Area. | No further actions are recommended for this species. |

| Species                                                                       | Conservation Status <sup>1</sup> | Habitat                                                                                                                                                                                                                                                          | Potential for Occurrence <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Recommendations                                      |
|-------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Vernal pool fairy shrimp<br><i>Branchinecta lynchi</i>                        | FT                               | Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools, and grassy swales, earth slumps, or basalt-flow depression pools.     | <b>Unlikely.</b> Although there are vernal pools that are a part of the Lake-Napa Vernal Pool complex about 2 miles north west of the property, this species has not been documented in Lake County (CDFW 2019a, Erikson and Belk, 1999). Additionally, no vernal pools with soil and/or hydrological characteristics that could support this species were observed within the Phase 2 and Open Space Study Area.                                                                                     | No further actions are recommended for this species. |
| Valley elderberry longhorn beetle<br><i>Desmocerus californicus dimorphus</i> | FT                               | Occurs only in the central valley of California, in association with blue elderberry ( <i>Sambucus mexicana</i> ). Prefers to lay eggs in elderberry 2 to 8 inches in diameter; some preference shown for "stressed" elderberry.                                 | <b>Unlikely.</b> The property is located west of this species' documented range in the Central Valley. A non-listed subspecies, <i>Desmocerus californicus californicus</i> , is known to occur in the coast range hills. The closest documented occurrence of valley elderberry longhorn beetle is 12 miles northeast of the property in the Cache Creek watershed (CDFW 2019a.) Given the low dispersal ability of this species, it is unlikely to occur within the property (Collinge et al. 2001) | No further actions are recommended for this species. |
| California freshwater shrimp<br><i>Syncaris pacifica</i>                      | FE, SE                           | Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water. | <b>Unlikely.</b> Although the Phase 2 and Open Space Study Area contains perennial streams, this species has not been documented in Lake County and the nearest documented occurrence is over 10 miles southwest of the property near Calistoga, in a different watershed from the Phase 2 and Open Space Study Area (CDFW 2019a).                                                                                                                                                                    | No further actions are recommended for this species. |



**<sup>1</sup>Key to Conservation Status:**

|      |                                                           |
|------|-----------------------------------------------------------|
| FE   | Federal Endangered                                        |
| FT   | Federal Threatened                                        |
| FC   | Federal Candidate                                         |
| BCC  | USFWS Birds of Conservation Concern                       |
| SE   | State Endangered                                          |
| ST   | State Threatened                                          |
| SC   | State Candidate                                           |
| SSC  | CDFW Species of Special Concern                           |
| CFP  | California Fully Protected Species                        |
| WBWG | Western Bat Working Group High or Medium Priority Species |

**<sup>2</sup>Potential for Occurrence:**

**No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

**Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

**Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

**High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Present.** Species was observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

**APPENDIX H**  
**SITE PHOTOGRAPHS**







Photograph 1. Example of white alder groves along Bucksnot Creek (taken June 7, 2017).



Photograph 2. Example of white alder groves along Bucksnot Creek (taken June 7, 2018).





Photograph 3. Example of Sargent cypress woodland (taken April 18, 2018).



Photograph 4. Example of Sargent cypress woodland in the southern portion of the Study Area (taken April 18, 2018).





Photograph 5. Example of foothill pine woodland (taken April 2, 2018).



Photograph 6. Example of foothill pine woodland (taken March 30, 2018).





Photograph 7. Example of Douglas fir forest (in background) (taken May 25, 2019).



Photograph 8. Example of mixed oak woodland (in background, on right) (taken May 25, 2019).





Photograph 9. Example of blue oak woodland (taken April 18, 2018).



Photograph 10. Example of blue oak woodland (taken March 30, 2018).



Photograph 11. Example of blue oak savanna (taken June 6, 2017).





Photograph 12. Example of valley oak woodland along Bucksnot Creek (taken June 8, 2017).



Photograph 13. Example of valley oak woodland along Bucksnot Creek (taken June 8, 2017).





Photograph 14. Example of interior live oak woodland (taken June 6, 2017).



Photograph 15. Example of interior live oak woodland (taken June 6, 2017).





Photograph 16. Example of chamise chaparral (taken April 18, 2018).



Photograph 17. Example of chamise chaparral (burned) (taken April 20, 2018).



Photograph 18. Example of chamise chaparral (taken May 1, 2018).





Photograph 19. Example of whiteleaf manzanita chaparral (taken April 18, 2018).



Photograph 20. Example of whiteleaf manzanita chaparral (taken August 21, 2018).





Photograph 21. Example of musk brush chaparral (taken March 29, 2018).



Photograph 22. Example of musk brush chaparral (taken June 7, 2018).





Photograph 23. Example of California yerba santa scrub (taken March 14, 2018).



Photograph 24. Example of California yerba santa scrub (taken March 14, 2018).





Photograph 25. Example of scrub oak chaparral (taken April 20, 2018).



Photograph 26. Example of leather oak chaparral (burned) (taken May 15, 2018).





Photograph 27. Example of leather oak chaparral (burned) (taken April 20, 2018).



Photograph 28. Example of leather oak chaparral (taken May 15, 2018).





Photograph 29. Example of Brewer willow thickets along McCain Creek (taken June 8, 2017).



Photograph 30. Example of Brewer willow thickets along McCain Creek (taken May 18, 2018).





Photograph 31. Example of non-native grasslands, in spring (taken March 30, 2018).



Photograph 32. Example of non-native grasslands, with native wildflowers (taken March 19, 2018).



Photograph 33. Example of non-native grasslands, with native wildflowers (taken April 20, 2018).





Photograph 34. Example of non-native grasslands, in late summer (taken June 8, 2017).



Photograph 35. Example of non-native grasslands, with native wildflowers (taken September 6, 2018).



Photograph 36. Example of non-native grasslands, with native wildflowers (taken June 8, 2017).





Photograph 37. Example of purple needlegrass grassland (taken April 19, 2018).



Photograph 38. Example of emergent wetland (taken June 5, 2017).





Photograph 39. Example of emergent wetland (taken June 7, 2017).



Photograph 40. Example of emergent wetland (taken June 5, 2017).



Photograph 41. Example of emergent wetland (taken June 5, 2017).





Photograph 42. Example of in-line reservoir on an unnamed stream near Lower Bohn Lake (taken June 4, 2018).



Photograph 43. Example of off-line reservoir on a tributary to Butts Creek (taken April 18, 2018).



Photograph 44. Blacktail Lake (in-line reservoir) (taken April 18, 2018).





Photograph 45. Example of ephemeral stream (taken April 20, 2018).



Photograph 46. Example of ephemeral stream (taken April 19, 2018).



Photograph 47. Example of ephemeral stream (taken April 19, 2018).





Photograph 48. Example of intermittent stream (unnamed) (taken April 18, 2018).



Photograph 49. Example of intermittent stream (unnamed) (taken April 19, 2018).



Photograph 50. Example of intermittent stream (Butcherknife Creek) (taken June 7, 2017).





Photograph 51. Example of perennial stream (Putah Creek) (taken April 20, 2018).



Photograph 52. Example of perennial stream (Bucksnot Creek) (taken June 7, 2017).



Photograph 53. Example of perennial stream (Bucksnot Creek) (taken May 30, 2018).





Photograph 54. Example of agricultural (vineyard) areas (taken April 19, 2018).



Photograph 55. Example of agricultural (vineyard) areas (taken August 22, 2018).





Photograph 56. Example of rock outcrops (taken June 7, 2018).



Photograph 57. Example of rock outcrops (taken June 7, 2018).





Photograph 58. Keck's checkerbloom (*Sidalcea keckii*; FE, CNPS Rank 1B.1) (taken May 17, 2018).



Photograph 59. Keck's checkerbloom (taken May 17, 2018).



Photograph 60. Lake County western flax (*Hesperolinon didymocarpum*; SE, CNPS Rank 1B.2) (taken May 17, 2018).



Photograph 61. Lake County western flax (taken May 15, 2018).





Photograph 62. Knociti manzanita (*Arctostaphylos manzanita* ssp. *elegans*; CNPS Rank 1B.3) (taken May 26, 2019).



Photograph 63. Knociti manzanita (taken May 26, 2019).



Photograph 64. Narrow-anthered brodiaea (*Brodiaea leptandra*; CNPS Rank 1B.2) (taken June 14, 2018).



Photograph 65. Greene's narrow-leaved fleabane (*Erigeron greenei*; CNPS Rank 1B.2) (taken June 14, 2018).





Photograph 66. Two-carpellate western flax (*Hesperolinon bicarpellatum*; CNPS Rank 1B.2) (taken May 15, 2018).



Photograph 67. Two-carpellate western flax (taken June 14, 2018).



Photograph 68. Colusa layia (*Layia septentrionalis*; CNPS Rank 1B.2) (taken April 19, 2018).



Photograph 69. Colusa layia (taken April 20, 2018).





Photograph 70. Green jewelflower (*Streptanthus hesperidis*; CNPS Rank 1B.2) (taken June 8, 2018).



Photograph 71. Green jewelflower (taken June 13, 2018).



Photograph 72. Morrison's jewelflower (*Streptanthus morrisonii*; CNPS Rank 1B.2) (taken June 14, 2018).



Photograph 73. Morrison's jewelflower (taken June 14, 2018).



Photograph 74. Tall snapdragon (*Antirrhinum virga*; CNPS Rank 4.3) (taken June 8, 2017).



Photograph 75. Cleveland's milkvetch (*Astragalus clevelandii*; CNPS Rank 4.3) (taken June 15, 2018).



Photograph 76. Pink star tulip (*Calochortus uniflorus*; CNPS Rank 4.2) (taken May 8, 2019).

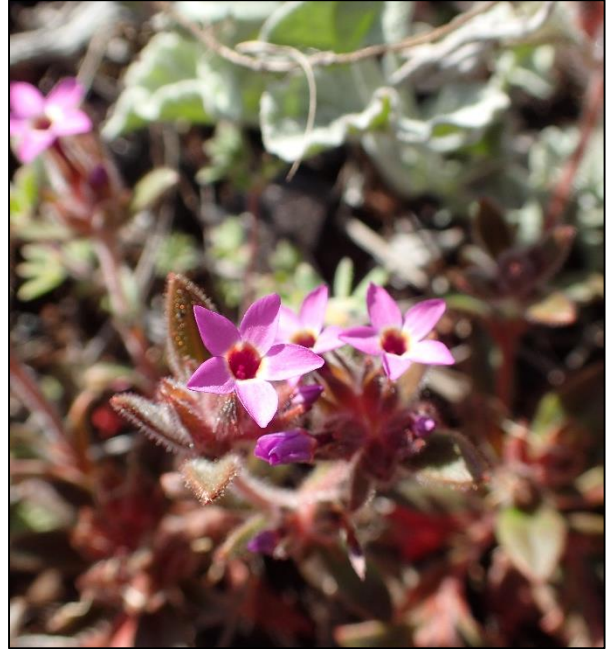


Photograph 77. Mt. Saint Helena morning glory (*Calystegia collina* ssp. *oxyphylla*; CNPS Rank 4.2) (taken May 16, 2018).





Photograph 78. Tracy's clarkia (*Clarkia gracilis* ssp. *tracyi*; Rank 4.2) (taken June 8, 2018).



Photograph 79. Serpentine collomia (*Collomia diversifolia*; CNPS Rank 4.3) (taken April 18, 2018).



Photograph 80. Serpentine bird's beak (*Cordylanthus tenuis* ssp. *brunneus*; CNPS Rank 4.3) (taken on June 8, 2018).

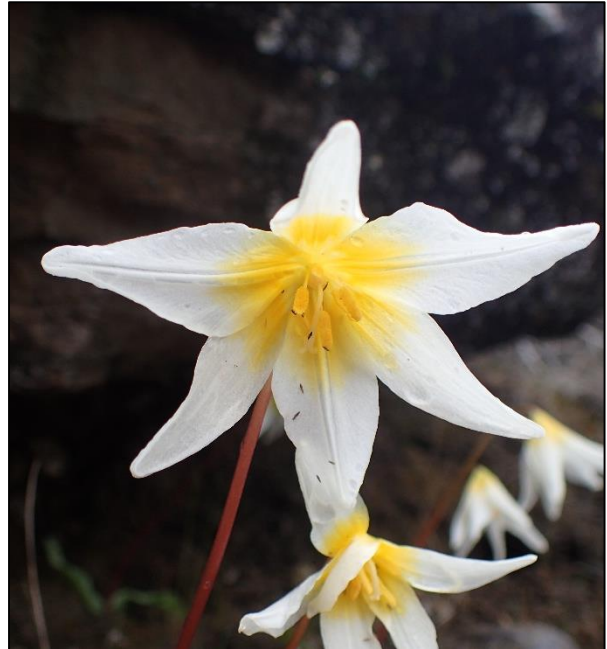


Photograph 81. Swamp larkspur (*Delphinium uliginosum*; CNPS Rank 4.2) (taken on May 15, 2018).





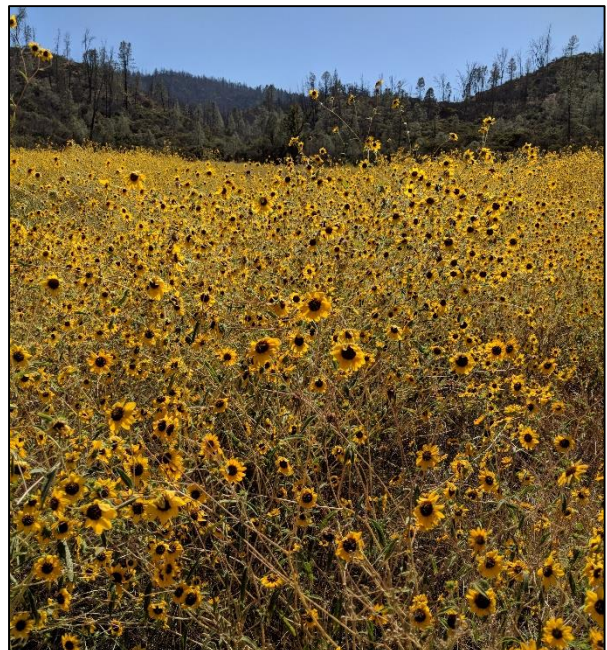
Photograph 82. Bare monkeyflower (*Erythranthe nudata*; CNPS Rank 4.3) (taken April 18, 2018).



Photograph 83. St. Helena fawn lily (*Erythronium helenae*; CNPS Rank 4.2) (taken March 14, 2018).

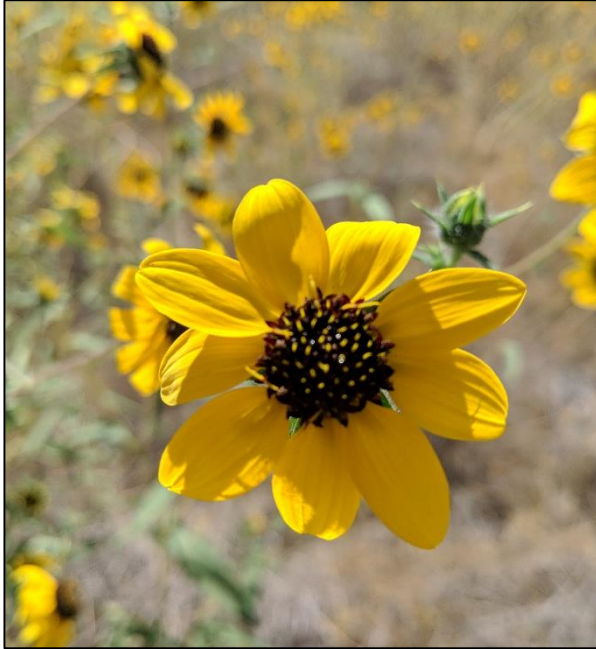


Photograph 84. Purdy's fritillary (*Fritillaria purdyi*; CNPS Rank 4.3) (taken March 14, 2018).

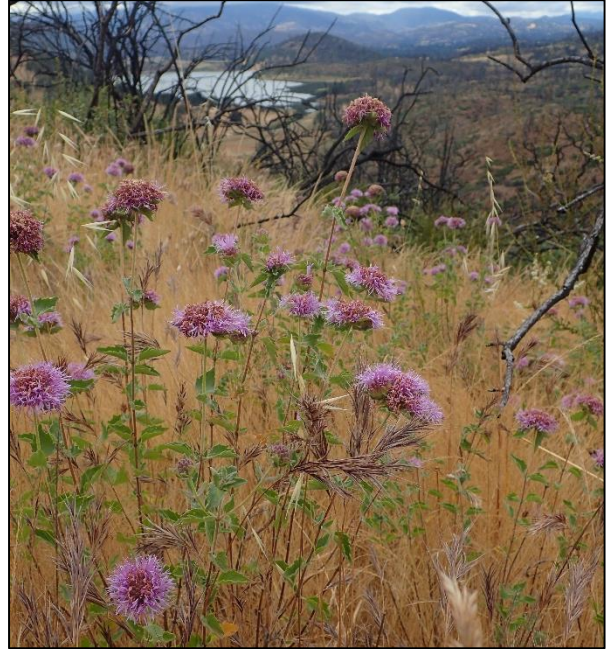


Photograph 85. Serpentine sunflower (*Helianthus exilis*; CNPS Rank 4.2) (taken September 6, 2018).





Photograph 86. Serpentine sunflower (taken September 6, 2018).



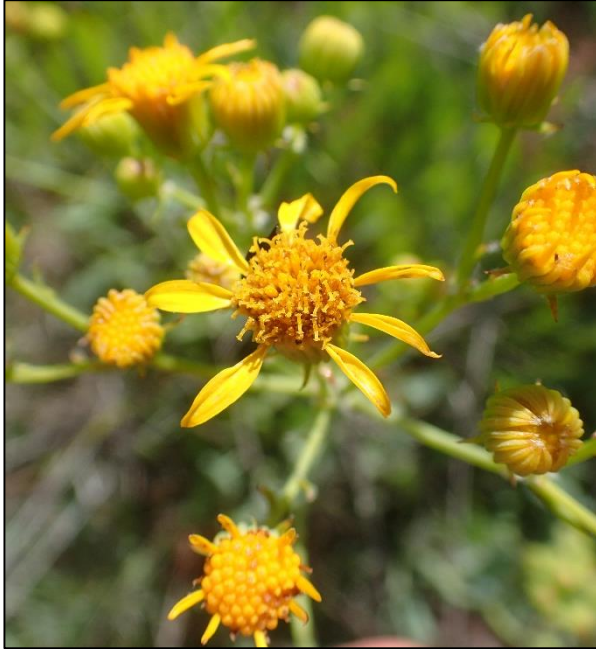
Photograph 87. Green monardella (*Monardella viridis*; CNPS Rank 4.3) (taken June 8, 2017).



Photograph 88. Cotula navarretia (*Navarretia cotulifolia*; CNPS Rank 4.2) (taken May 3, 2018).



Photograph 89. Jepson's navarretia (*Navarretia jepsonii*; CNPS Rank 4.3) (taken June 7, 2017).



Photograph 90. Cleveland's ragwort (*Senecio clevelandii* var. *clevelandii*; CNPS Rank 4.3) (taken June 15, 2018).



Photograph 91. Marsh zigadenus (*Toxicoscordion fontanum*; CNPS Rank 4.2) (taken May 18, 2018).

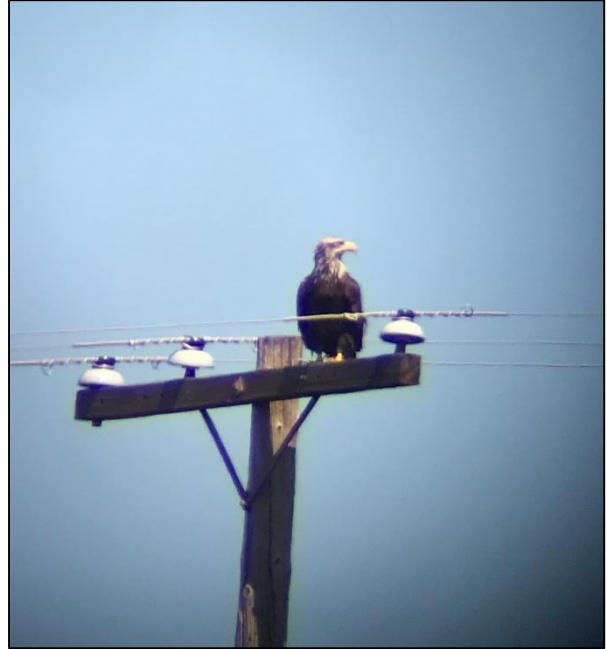


Photograph 92. Dark-mouth triteleia (*Triteleia lugens*; CNPS Rank 4.3) (taken May 18, 2018).





Photograph 93. Golden eagle (*Aquila chrysaetos*; BGEA, CFP, BCC) (taken April 2, 2018).



Photograph 94. Bald eagle (*Haliaeetus leucocephalus*; BGEA, SE, CFP BCC) (taken April 25, 2018).



Photograph 95. Peregrine falcon (*Falco peregrinus*; CFP, BCC) nest located outside of the Study Area (taken April 3, 2018).



Photograph 96. Western pond turtle (*Actinemys marmorata*; SSC) (taken April 3, 2018).



Photograph 97. Western pond turtle (taken April 3, 2018).





Photograph 98. Foothill yellow-legged frog (*Rana boylei*; SC, SCC) egg masses within Butts Creek in the southern portion of the Study Area (taken April 4, 2018).



Photograph 99. Foothill yellow-legged frog egg masses within Butts Creek in the southern portion of the Study Area (taken April 4, 2018).