

Hollister Hills SVRA

Vegetation Mapping Report 2022

California State Parks



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Table of Contents

Link to GIS data files.....	2
Introduction.....	2
Goals and Purpose	2
Summary of Vegetation Mapping Effort.....	3
Description of Hollister Hills SVRA	3
Methods	3
Fieldwork	3
Data interpretation and linework.....	3
Accuracy Assessment	4
Vegetation Types and Descriptions	4
Field Vegetation Key.....	9
Accuracy Assessment Results.....	11
References	11
Link to GIS data files	11
Appendices	13
Appendix A: Map Figures.....	13
Appendix B: Field datasheets	15
Appendix C: Plant species list	31
Appendix D: Reconnaissance protocol and field form	44

Link to GIS data files

[Finescale Vegetation Mapping at the SVRAs \(arcgis.com\)](#)

Introduction

Goals and Purpose

This finescale vegetation map for Hollister Hills SVRA was developed by California State Park staff in 2021 and 2022. Its development was prompted by the passage of Senate Bill 249, in which California Department of Parks and Recreation’s Off-Highway Motor Vehicle Recreation Division (OHMVRD) was charged with meeting new legislative mandates to ensure resources compliance within all State Vehicular Recreation Areas (SVRAs). These mandates require (among other things) that OHMVRD compile an inventory of native plant communities within each SVRA [PRC 5090.35 (c)(1)]. To meet this requirement, OHMVRD has consulted the California Department of Fish and

Wildlife’s Vegetation Classification and Mapping Program (VegCAMP) to source finescale vegetation maps that cover the SVRA footprint, or, if not available, used the VegCAMP methods to develop a new finescale vegetation map.

The finescale vegetation map and associated data is intended to provide an inventory of native plant communities, inform the park’s natural resource management planning including the Wildlife Habitat Protection Plan (WHPP), and establish a baseline for measuring future vegetation change.

Summary of Vegetation Mapping Effort

April 2021	Conduct field surveys to sample vegetation types
August-December 2021	Create draft vegetation map
May 2022	Conduct accuracy assessment and additional surveys
August – December 2022	Finalize map

Description of Hollister Hills SVRA

Hollister Hills SVRA is a 6,750 acre park located in northwest San Benito County, eight miles south of the city of Hollister. It is situated within the Gabilan Range of the California Coast ranges, in an area surrounded by primarily by rangelands. The San Andreas fault bisects the park, resulting in a stark difference in soil types where the southwestern side of the fault is primarily granitic and the northeastern side is primarily sedimentary. The park has a history of ranching, farming, and motorcycle recreation, before it became a state park unit in 1975. There are several tributaries of Bird Creek that run through the park and are mostly ephemeral but have perennial flow in two short reaches within the park. There are different management units throughout the park which allow various levels of motorized vehicle recreation, mostly restricted to trails. There are also buffer areas and a nature preserve that are closed to motorized vehicles.

Methods

Fieldwork

Field surveys were conducted on April 19-23, 2021 by State Park staff, using VegCAMP’s standard methods for Relevé, Rapid Assessment, and Reconnaissance samples (Appendix D, CDFW a, CDFW-CNPS). Nineteen formal samples were taken, in addition to many notes and photo points throughout the park. On May 16-20, 2022, State Park staff conducted an accuracy assessment of the draft map, surveying 65 polygons and taking 3 additional formal samples.

Data interpretation and linework

At the time of conducting this project, Hollister Hills SVRA was not covered by any existing CDFW VegCAMP finescale vegetation maps or classifications. In order to interpret field data and assign vegetation types, State Park staff consulted existing vegetation classifications and mapping projects from the Great Valley Eco-Region (Buck-Diaz et al., 2012), Gabilan Ranch (Aerial Information Systems Inc., 2006), and the Northern Sierra Nevada foothills (Klein et al., 2007), as well as the Manual of California Vegetation Online (California Native Plant Society). CDFW VegCAMP staff provided review of field data and input on interpretation and classification of

vegetation types. It is expected that in the future, new classifications will be developed for the region and some of the mapped types here may change to reflect a more appropriate name.

Linework followed the mapping standards found in the “Survey of California Vegetation Classification and Mapping Standards” (CDFW b) as much as possible. The minimum mapping unit was 1 acre, and ¼ acre for wetland or special types. Polygons were divided based on a change in cover class according to Braun-Blanquet categories (<1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%), with a 3-acre minimum mapping unit for breaks in overstory vegetation, and a 5-acre minimum mapping unit for breaks in understory vegetation. Base imagery was NAIP 2020, with additional supplemental drone imagery captured by the park.

Accuracy Assessment

After the development of the draft map, an accuracy assessment was conducted in Spring 2022. Although there is no regional classification for the area, a vegetation key (included below) was created for the park, which field surveyors used to assess polygons. Prior to fieldwork, polygons that had not been previously visited for formal or informal samples were chosen for accuracy assessment. Polygons were chosen manually, with the goal of having polygons of the same vegetation type spread out throughout the park. Although ideally at least 5-10 polygons would have been visited of each vegetation type, because of the relatively small size and high diversity of the park, there were not always 5 unvisited polygons of each type to choose from. Some types had no unvisited polygons and could not be included. Additionally, some polygons that were chosen prior to fieldwork turned out to be inaccessible to field staff and were not visited. Because of these restrictions on sample size and restrictions on field time, this accuracy assessment is of relatively low power compared to one conducted for regional VegCAMP projects where many polygons of each type can be visited. However, the accuracy assessment informed valuable corrections to the draft map that improved the accuracy in the final map. Results are shown in Table 1 below.

Vegetation Types and Descriptions

Herbaceous Vegetation

California Annual and Perennial Grassland Macrogroup 1,722 acres

This vegetation type is composed of a mosaic of alliances that have the characteristic presence of native perennial or annual grasses or forbs, though non-native species are also present. The majority of grasslands are found on the east side of the San Andreas fault. Most are annual species such as wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), ripgut grass (*B. diandrus*), filaree (*Erodium cicutarium*), and bur-clover (*Medicago polymorpha*). Some small patches of perennial grasslands composed of needlegrass (*Nassella* spp.), bluegrass (*Poa secunda*), or melic grasses (*Melica* spp.) can also be found. Wildflowers, such as blow wives (*Achyrachaena mollis*), Johnny jump up (*Viola pedunculata*), Yampah (*Perideridia kelloggii*), and brodiaeas (*Brodiaea*, *Dichelostemma*, and *Triteleia* spp.) are common throughout.

Shrubland Vegetation

***Adenostema fasciculatum* - *Salvia* spp. (Chamise – Sage) Alliance**

1,026 acres

This Alliance is mapped when chamise (*Adenostema fasciculatum*) is co-dominant in the shrub canopy with black sage (*Salvia mellifera*) and/or California sagebrush (*Artemisia californica*). Other species include California buckwheat (*Eriogonum fasciculatum*), brittle leaf manzanita (*Arctostaphylos crustacea* ssp. *crustacea*), buck brush (*Ceanothus cuneatus*), wavyleaf silktassel (*Garrya elliptica*), deerweed (*Acmispon glaber*), hollyleaf redberry (*Rhamnus ilicifolia*), monkeyflower (*Diplacus aurantiacus*). The herbaceous layer is sparse, and emergent trees may be present at low cover. This Alliance is drought tolerant and occurs on ridges and south-facing slopes. At the park, the majority of these stands occur on the south side of the San Andreas fault.

***Quercus wislizeni* – *Quercus chrysolepis* (Interior Live Oak - Canyon Live Oak) (shrub) Alliance
421 acres**

This Alliance is mapped where the shrub form of interior live oak (*Quercus wislizeni*) is dominant in the shrub canopy at 2-3 meters in height. A diverse mix of species make up the remainder of the shrub canopy including inland scrub oak (*Quercus berberidifolia*), chamise (*Adenostema fasciculatum*), buck brush (*Ceanothus cuneatus*), brittle leaf manzanita (*Arctostaphylos crustacea* ssp. *crustacea*), wavyleaf silktassel (*Garrya elliptica*), wartleaf ceanothus (*Ceanothus papillosus*), redberry buckthorn (*Rhamnus crocea*), poison oak (*Toxicodendron diversilobum*), bush monkey flower (*Diplacus auranticus*), and hollyleaf cherry (*Prunus ilicifolia*). This Alliance occurs on north-facing slopes on the south side of the fault.

Baccharis pilularis* (Coyote Brush) Alliance*144 acres**

This Alliance is mapped where coyote brush (*B. pilularis*) shrubs are dominant in the shrub canopy (or co-dominant with poison oak (*Toxicodendron diversilobum*)). This Alliance occurs on the east side of the park. There is typically a grassy understory composed of a mix of annual grasses and native forbs.

Artemisia californica* – *Salvia mellifera* (California Sagebrush - Black Sage) Alliance*67 acres**

This Alliance is mapped where California sagebrush and black sage co-dominate in the shrub layer. Other species include bush monkeyflower (*Diplacus auranticus*), deerweed (*Acmispon glaber*), and poison oak (*Toxicodendron diversilobum*). Small stands of this Alliance occur on the northside of the San Andreas fault.

Adenostema fasciculatum* (Chamise) Alliance*60 acres**

This Alliance is mapped where chamise (*A. fasciculatum*) is dominant in the shrub canopy. Other shrubs present at low cover include black sage (*S. mellifera*), and California sagebrush (*Artemisia californica*). The herbaceous layer is generally sparse, although in the Lower Ranch Granitic MU, Sonoma sage (*Salvia sonomensis*) has significant cover as a creeping subshrub/perennial herb. A small stand of this Alliance occurs on the west side of Lower Ranch Granite and Renz Motorized MUs.

Artemisia californica* – (*Salvia leucophylla*) (California sagebrush) Alliance*32 acres**

This Alliance is mapped when California sagebrush (*Artemisia californica*) dominates the shrub canopy. (Note that despite the alliance name, *Salvia leucophylla* is not present at Hollister Hills

SVRA). Other shrubs occur at lower cover including coyote brush (*Baccharis pilularis*), chaparral honeysuckle (*Lonicera subspicata* var. *denudata*) and California buckwheat (*Eriogonum fasciculatum*). This Alliance is highly drought tolerant and often occurs on the driest south-facing slopes of the park.

***Toxicodendron diversilobum* (Poison Oak) Alliance**

26 acres

This Alliance is mapped where poison oak (*Toxicodendron diversilobum*) is strongly dominant in the shrub canopy with a grassy herbaceous layer. Other shrubs may be present at low cover include coyote brush (*B. pilularis*), California sagebrush (*A. californica*) and black sage (*S. mellifera*).

***Arctostaphylos (crustacea, tomentosa)* (Brittle leaf manzanita) Alliance**

19 acres

This Alliance is mapped where brittle leaf manzanita (*Arctostaphylos crustacea* ssp. *crustacea*) is dominant in the shrub layer or co-dominant with chamise (*Adenostema fasciculatum*). Other species in these stands include Sonoma sage (*Salvia sonomensis*), wavyleaf silktassel (*Garrya elliptica*) and toyon (*Heteromeles arbutifolia*). This alliance occurs on the south side of the fault, at high elevations, on flats or gently sloping north-facing aspects.

***Prunus ilicifolia* – *Heteromeles arbutifolia* - *Ceanothus spinosus*) (Hollyleaf Cherry – Toyon – Greenbark ceanothus) Chaparral Alliance**

8 acres

This Alliance is mapped where the shrub canopy is co-dominated by toyon (*Heteromeles arbutifolia*), birch-leaf mountain mahogany (*Cercocarpus betuloides*), western white clematis (*Clematis ligusticifolia*), poison oak (*Toxicodendron diversilobum*), buck brush (*Ceanothus cuneatus*), and hollyleaf cherry (*Prunus ilicifolia*). Despite the Alliance name, *C. spinosus* does not occur at the park. The alliance occurs on mesic north-facing slopes and is mapped in two small stands at the park.

***Ceanothus cuneatus* (Buck brush chaparral) Shrubland Alliance – 2 acres:**

Although buck brush is common throughout the park, this small stand is mapped where buck brush cover is significantly high and forms a 2 acre stand. Buck brush co-dominates with chamise (*Adenostema fasciculatum*), with lower cover of black sage (*Salvia mellifera*), hairy ceanothus (*Ceanothus oliganthus*), and birch-leaf mountain mahogany (*Cercocarpus betuloides*).

Forest and Woodland Vegetation

***Quercus agrifolia* (Coast Live Oak) Alliance**

1,432 acres

This Alliance is mapped where coast live oak dominates the overstory with understory shrubs such as poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), common snowberry (*Symphoricarpos albus*), toyon (*Heteromeles arbutifolia*), and herbaceous species such as California polypody (*Polypodium californicum*), bracken fern (*Pteridium aquilinum* var. *pubescens*), and miner's lettuce (*Claytonia perfoliata*). This Alliance occurs throughout the park, with denser canopy cover in mesic areas such as in canyons or drainages. In drier areas coast live oaks are more widely spaced, and the understory may consist entirely of grassland species with a

few shrubs. Where coast live oak woodlands integrate with chaparral, shrub species such as chamise (*Adenostoma fasciculatum*), chaparral currant (*Ribes malvaceum*), and ceanothus form the understory. When the coast live oak integrates with coastal scrub, sticky monkeyflower (*Mimulus aurantiacus*), coyote brush (*Baccharis pilularis*), and California sagebrush (*Artemisia californica*), among other species, form the understory.

***Quercus agrifolia* – *Aesculus californica* (Coast Live Oak – California Buckeye Association)**

50 acres

This Association is mapped where Coast live oak and California buckeye co-dominate in the tree canopy. Other characteristics of these stands are consistent with the Coast Live Oak Alliance described above.

***Quercus douglasii* (Blue Oak) Alliance**

939 acres

This Alliance is mapped where blue oak (*Quercus douglasii*) is dominant in the tree overstory, or >30% relative cover when mixing with coast live oak (*Quercus agrifolia*). Valley oak (*Quercus lobata*) and California buckeye (*Aesculus californica*) may be present at low cover. Annual grasses and forbs typically comprise the understory. The blue oak woodland community is characteristic of sheltered valleys and north-facing slopes. Common understory shrubs include chamise (*A. fasciculatum*), sticky monkeyflower (*Diplacus aurantiacus*), California sagebrush (*A. californica*), and black sage (*Salvia mellifera*).

***Quercus douglasii* – *Quercus agrifolia* (Blue Oak – Coast Live Oak) Association**

187 acres

This Association is mapped where blue oak and coast live oak co-dominate in the tree canopy. Other characteristics of these stands are consistent with the Blue Oak Alliance described above.

***Quercus douglasii* – *Aesculus californica* (Blue Oak – California Buckeye) Association**

58 acres

This Association is mapped where blue oak and California buckeye co-dominate in the tree canopy. Other characteristics of these stands are consistent with the Blue Oak Alliance described above.

***Platanus racemosa* – *Quercus agrifolia* (California Sycamore – Coast Live Oak) Alliance**

126 acres

This riparian Alliance is mapped where California sycamore is present, typically mixing with coast live oak, or when coast live oak is dominant or co-dominant in the tree canopy in a riparian habitat. Typical understory shrubs include California blackberry (*Rubus ursinus*), blue elderberry (*Sambucus nigra*), and poison oak (*Toxicodendron diversilobum*). This Alliance occurs along Bird Creek and its tributaries.

***Aesculus californica* (California Buckeye) Alliance**

59 acres

This Alliance is mapped where California buckeye (*Aesculus californica*) is dominant in the tree canopy. Other species include toyon (*Heteromeles arbutifolia*), foothill pine (*Pinus sabiniana*),

valley oak (*Quercus lobata*), interior live oak (*Quercus wislizeni*), coast live oak (*Quercus agrifolia*), and blue oak (*Quercus douglasii*).

***Acer macrophyllum* (Bigleaf Maple) Alliance**

12 acres

This Alliance is mapped when the tree canopy is dominated by bigleaf maple (*Acer macrophyllum*). Other trees present may include California sycamore (*Platanus racemose*), coast live oak (*Quercus agrifolia*), red alder (*Alnus rhombifolia*) and madrone (*Arbutus menziesii*). Understory species include poison oak (*Toxicodendron diversilobum*), western azalea (*Rhododendron occidentale*), creeping snowberry (*Symphoricarpos mollis*), and California blackberry (*Rubus ursinus*). This Alliance occurs in riparian woodlands or sheltered, or canyon bottoms along stream banks.

***Quercus lobata* (Valley Oak) Alliance**

8 acres

This Alliance is mapped where Valley Oak (*Quercus lobata*) is dominant in the tree canopy, or co-dominant with coast live oak (*Quercus agrifolia*). There are 3 small valley oak communities within the Park.

***Pinus coulteri* (Coulter Pine) Alliance**

2 acres

This Alliance is mapped where Coulter pine is at least 10% absolute cover in the tree canopy. Although emergent Coulter pine is present at lower cover in shrubland alliances throughout much of the higher elevations of the park, the species only occurs at high enough cover to be considered a Coulter pine Alliance in two small stands of 1 acre each. The shrub layer is well-developed and includes species from the Interior Live Oak (*Quercus wislizeni*) - Canyon Live Oak (*Quercus chrysolepis*) Shrubland Alliance.

***Arbutus menziesii* (Madrone) Forest Alliance**

1 acre

This Alliance is mapped in one small riparian stand near a spring. The tree canopy is dominated by madrone (*Arbutus menziesii*), and the tree form of canyon live oak (*Quercus chrysolepis*). Understory shrubs include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and western azalea (*Rhododendron occidentale*).

Field Vegetation Key

Tree Types

NVCS Name	Membership rules at HHSVRA
Live Oak (<i>Quercus agrifolia</i>) Alliance	Live oak is >70% relative cover when mixed with blue oak. OR Live oak is >50% relative cover when mixed with other trees (if sycamore is present at >5% cover, key to sycamore alliance)
Live Oak - Buckeye (<i>Quercus agrifolia</i> - <i>Aesculus californica</i>) association	Within live oak stand, buckeye has significant cover (>5% absolute cover) in the tree layer but not more than live oak. If buckeye is >50% relative cover, key to buckeye alliance.
Blue Oak (<i>Quercus douglasii</i>) Alliance	Blue oak is >50% relative cover in the tree canopy OR Blue oak is >30% relative cover when mixed with live oak
Blue Oak - Live Oak (<i>Quercus douglasii</i> - <i>Quercus agrifolia</i>) association	Blue oak and live oak are codominant (both 30-60% relative cover) in the tree layer
Blue oak - Buckeye (<i>Quercus douglasii</i> - <i>Aesculus californica</i> / grass) association	Within blue oak stand, buckeye has significant cover (>5% absolute cover) in the tree layer but not more than blue oak
Buckeye (<i>Aesculus californica</i>) Alliance	Buckeye is >50% relative cover in tree layer
Valley Oak (<i>Quercus lobata</i>) Alliance	Valley oak is >30% cover in the tree layer (without sycamore present. If sycamore is present, key to sycamore alliance)
Sycamore - Live Oak (<i>Plantanus racemosa</i> - <i>Quercus agrifolia</i>) Alliance	Sycamore is present, even at very low cover, in riparian settings. Live oak and valley oak may have higher cover.
Bigleaf Maple (<i>Acer macrophyllum</i>) Alliance	Bigleaf maple is >25% relative cover. If sycamore is present, it is love cover than bigleaf maple.
Coulter pine (<i>Pinus coulterii</i>) Alliance	Coulter pine >30% relative cover and >10% absolute cover in tree canopy, often over well-developed shrub layer. (Coulter pine often emergent over shrub types at HHSVRA, but is rarely >10% absolute cover within park boundaries)

Shrub Type

NVCS Name	Membership rules at HHSVRA
Chamise (<i>Adenostoma fasciculatum</i>) Alliance	Chamise is >60% relative cover.
Chamise - Black sage or other <i>Salvia</i> spp. (<i>Adenostoma fasciculatum</i> - <i>Salvia</i> spp.) Alliance	Both chamise and black sage (<i>Salvia mellifera</i>) have 30-60% relative cover.
Black sage (<i>Salvia mellifera</i>) Alliance	Black sage is >60% relative cover.
California sagebrush - Black Sage (<i>Artemisia californica</i> - <i>Salvia mellifera</i>) Alliance	Both california sagebrush and black sage (<i>Salvia mellifera</i>) have 30-60% relative cover.
California sagebrush (<i>Artemisia californica</i> - <i>Salvia mellifera</i>) Alliance	California sagebrush >60% relative cover. (<i>Salvia leucophylla</i> is not present at HHSVRA, this is just the name of the alliance).
Poison Oak (<i>Toxicodendron diversilobum</i>)	Poison oak is >50% relative cover over a grassy understory or >70% relative cover if other shrubs are present.
Coyote Brush (<i>Baccharis pilularis</i>) Alliance	Coyote brush is >15% absolute shrub cover over grassy understory and >50% relative cover in shrub layer (or >30% if poison oak is the only other shrub).
Interior Live Oak (shrub) - Canyon Live Oak (<i>Quercus wislizeni</i> - <i>Quercus chrysolepis</i>) Alliance	Interior live oak shrubs >30% relative cover. Shrubs may be tall (2-3m).
Brittle leaf - Woolly leaf manzanita, <i>Arctostaphylos</i> (<i>crustacea</i>, <i>tomentosa</i>) Alliance	Brittle-leaf manzanita or woolly leaf manzanita >30% relative cover in shrub canopy.
Holly Leaf Cherry - toyon - greenbark ceanothus (<i>Prunus ilicifolia</i> - <i>Hetermeles arbutifolia</i> - <i>Ceanothus spinosus</i>) Alliance	Toyon (<i>Hetermeles arbutifolia</i>), holly leaf cherry (<i>Prunus ilicifolia</i>) mountain mohagany (<i>Cercocarpus betuloides</i>), <i>Ceanothus</i> spp., and <i>Clematis lingustifolia</i> are characteristic. Steep slopes. Poison oak may co-dominate but is not diagnostic in the presence of these shrubs.
Buck brush (<i>Ceanothus cuneatus</i>) Alliance	Buck brush (white flowers) >50% relative cover in the shrub canopy, or >30% relative cover with chamise (<i>Adenostoma fasciculatum</i>).

Accuracy Assessment Results

Table 1: Results of Accuracy Assessment surveys at Hollister Hills in Spring 2022

NVCS Name	NVCS Level	# Identified correctly	# Surveyed	Score
<i>Adenostoma fasciculatum</i>	Alliance	4	4	100%
<i>Adenostoma fasciculatum</i> - <i>Salvia</i> spp.	Alliance	5	10	50%
<i>Arctostaphylos</i> (crustacea, tomentosa)	Alliance	1	1	100%
<i>Artemisia californica</i> - (<i>Salvia leucophylla</i>)	Alliance	3	5	60%
<i>Artemisia californica</i> - <i>Salvia mellifera</i>	Alliance	4	5	80%
<i>Baccharis pilularis</i>	Alliance	7	7	100%
<i>Toxicodendron diversilobum</i>	Alliance	4	5	80%
<i>Aesculus californica</i>	Alliance	1	1	100%
<i>Quercus agrifolia</i>	Alliance	7	7	100%
<i>Quercus agrifolia</i> - <i>Aesculus californica</i>	Association	3	3	100%
<i>Quercus douglasii</i>	Alliance	5	6	83%
<i>Quercus douglasii</i> - <i>Aesculus californica</i>	Association	3	3	100%
<i>Quercus douglasii</i> - <i>Quercus agrifolia</i>	Association	2	3	67%
<i>Quercus wislizeni</i> - <i>Quercus chrysolepis</i> (shrub)	Alliance	4	4	100%
<i>Quercus lobata</i>	Alliance	1	1	100%
	Total	54	65	83%

References

Link to GIS data files

Finescale Vegetation Mapping at the SVRAs (arcgis.com)

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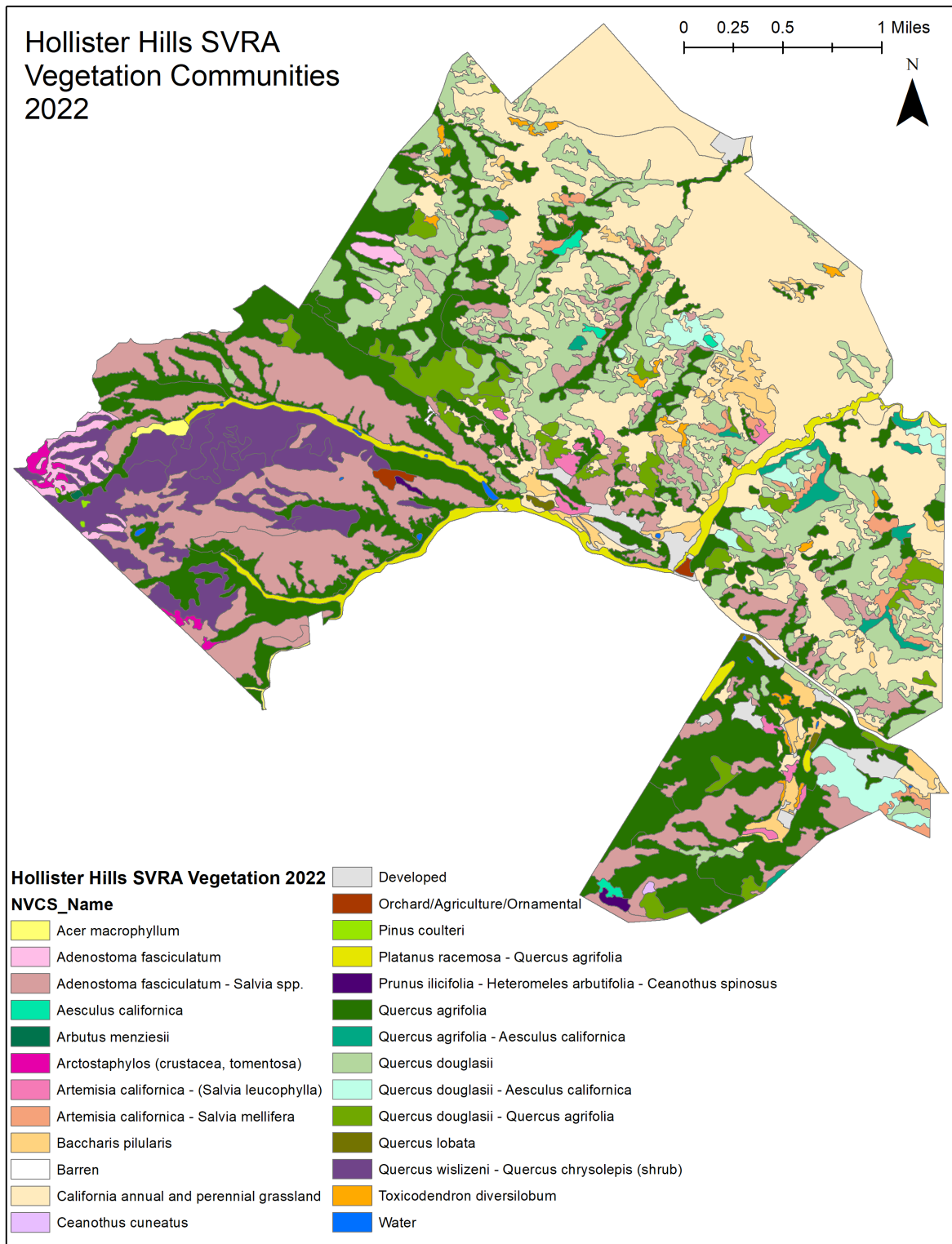
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Appendices

Appendix A: Map Figures



Appendix B: Field datasheets

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: Leah Gardner Date: 4-20-21 Return? ☐

Waypoint ID: H4001 GPS Name: MVP phone Projected? No / Yes / Base / Digitized

UID: If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____

Location Name: Hollister If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: (ft./m.) PDOP 30

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 36.770113 LONG: 121.420062

Stand Size: <1 (1-5) >5 Camera: MVP phone Photos: 24 View Radius 100 m

Exposure, Actual °: 90 NE NW SE SW Flat Variable | Steepness, Actual °: 1° (0°) 1-5° >5-25° >25

Field Alliance name: Platanus racemosa - Quercus agrifolia Woodland Alliance

Comments: Riparian zone along Bird Creek. Very large old sycamores & Live Oaks. Some valley oak & grey maple, & alder. Very diverse, Elderberry in understory, Natives! Sycamores are still leafing out. Valley oaks leafed out. Road bisects stand. Species & comp. is variable as we move through

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover	
T	Quercus agrifolia	3		T	Alnus rhombifolia	3		S	Poison oak	15					
T	Platanus racemosa	10		T	Salix spp.	3		S	Rubus ursinus	25					
T	Acer macrophyllum	<1		T	Walnut sp.	<1		S	Symphoricarpos albus	1					
T	Quercus lobata	<1		S	Sambucus cerulea	<1		H	Mugwort	<1					
					nettle	<1		H	Stachys sp.	<1					
								H	Gynerium sp.	<1					

Recorder: _____ Other Surveyors: _____ Date: _____ Return? ☐

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG Date: 4-20-21 Return? ☐

Waypoint ID: H4002 GPS Name: MVP phone Projected? No / Yes / Base / Digitized

UID: If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____

Location Name: Hollister-Hudner If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: (ft./m.) PDOP 20

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 36.780317 LONG: 121.400597

Stand Size: <1 (1-5) >5 Camera: MVP phone Photos: 24 plus extra views View Radius 25 m

Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: bottom 0° (1-5°) >5-25° >25

Field Alliance name: Platanus racemosa - Quercus agrifolia Woodland Alliance

Comments: Riparian canyon adjacent to grassy upland. Poison oak, snowberry, Stachys in understory. Thick leaf litter. Some upland species present, including 10+ willow. Sycamores less common to NE, compared to SW

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover	
T	Q. agrifolia	20		S	Toxicodendron	3		S	Ribes californica	<1					
T	Q. lobata	10		S	Eaccharis sp. glutinosa	<1		H	Stachys biolata	1					
S?	Salix sp.	7		S	Helianthus arcticifolius	<1		H	Wpethia sp.	1					
S	Symphoricarpos albus	3		S	B. pilularis	<1		H	Artemisia longicaulis	1					
								H	Sanicula crassicaulis	<1					

Recorder: _____ Other Surveyors: _____ Date: _____ Return? ☐

Waypoint ID: _____ GPS Name: _____ Projected? No / Yes / Base / Digitized

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG, Nicolas, Mason Date: 4-20-21 Return? ☐

Waypoint ID: HH003 GPS Name: MVP Phone Projected? No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
UID: If Yes or Digitized, enter: Base Waypoint ID: _____
Location Name: Hollister - Granite "nature area" Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft/ m/ PDOP 20
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.759165 LONG -121.451490
Stand Size: <1 (S) >5 Camera: MVP Phone Photos: (N) View Radius _____
Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: var incline 0° 1-5° >5-25° >25
Field Alliance name: Acer macrophyllum Forest + Woodland Alliance
Comments: Narrow band of bigleaf maple. Live oak continuing up both slopes. Alder + sycamore, seasonal stream, perennial pools in spring-fed reaches. bedrock + boulders @ bottom of narrow canyon. 40° sloped down to bottom. Dense understory. Stream runs north some regenerating trees.

% Cover: Conifer			Hardwood			Total Tree			Regen Tree			Shrub			Herb			Total Veg			Exotics (L,M,H)		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
H	Polypodium cal.	1																					
T	Acer macrophyllum	30	T	Platanus racemosa	1	H	Dryopteris arguta	1															
T	Alnus rhombifolia	5	S	Toxicodendron diversilobum	18	S	Cornus sericea	1															
T	Q. agrifolia	1	H	Rubus ursinus	7	S	Symphoricarpos	3															

Recorder: MP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: _____ GPS Name: MVP Phone Projected? No / Yes / Base / Digitized

% Cover: Conifer			Hardwood			Total Tree			Regen Tree			Shrub			Herb			Total Veg			Exotics (L,M,H)		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Alnus rhombifolia	5																					
	Q. agrifolia	1																					

Recorder: MP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH004 GPS Name: MVP Phone Projected? No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
UID: If Yes or Digitized, enter: Base Waypoint ID: _____
Location Name: Hollister Adobe Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft/ m/ PDOP NA
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.789048 LONG -121.441784
Stand Size: <1 (S) >5 Camera: MVP Phone Photos: one bad photo - hard to get vantage? View Radius _____
Exposure, Actual °: 210 NE NW SE SW Flat Variable | Steepness, Actual °: 28 0° 1-5° >5-25° >25
Field Alliance name: Adenostoma fasciculatum shrubland Alliance
Comments: Dense patch of chamise chaparral, can't get inside. Black sage + other shrubs. Understory thick with litter. Shrubs tall + very dense. Not much herb layer.

% Cover: Conifer			Hardwood			Total Tree			Regen Tree			Shrub			Herb			Total Veg			Exotics (L,M,H)		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Adenostoma fas.	30	S	Toxicodendron diversilobum	2																		
S	Salvia mel.	45																					
S	Artemisia cal.	3	S	Deer weed	<1																		
S	Lonicera	<1	S	Bush Monkey flw	<1																		

Subspicata var. denudata

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH005
 UID:
 Location Name: Hollister Adobe

GPS Name: MVP phone Projected? (No) / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: (ft) / m / PDOP 26
 UTM's: UTM _____ UTMN _____
 Decimal degrees: LAT 36.788151 LONG -121.441517

Stand Size: <1 (-5) >5 Camera: MP Photos: (N) View Radius 70

Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: variable 0° 1-5° >5-25° >25°

Field Alliance name: *Quercus douglasii*

Comments: Bye oak stand, Bowl-shaped convex to topography, lots of lichen (lace or old man's beard), some bunchgrasses mixed in w/non-natives. Bushy poison oak. Buckeye in understory - shorter. History of grazing but a long time ago.

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	% cover
T	Blue oak	13	S	Poison oak	1	H	Stipa sp.	41							
H	Arceuthobium	20	H	Bromus sp.	10	H	Achillea millefolium	<1							
T	Buckeye	2	T	Live oak	<1	H	Pacific pea	<1							

8 Stachys, Wyethia heleniodes, buttercups, blue dicks all <1

Recorder: _____ Other Surveyors: _____ Date: _____ Return? ☐

Waypoint ID: _____ GPS Name: _____ Projected? No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft / m / PDOP _____
 UTM's: UTM _____ UTMN _____
 Decimal degrees: LAT _____ LONG _____

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH006
 UID:
 Location Name: Hollister Adobe

GPS Name: MVP phone Projected? No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft / m / PDOP _____
 UTM's: UTM _____ UTMN _____
 Decimal degrees: LAT 36.780331 LONG -121.430467

Stand Size: <1 (-5) >5 Camera: MP phone Photos: (N) View Radius 50

Exposure, Actual °: 192 NE NW SE SW Flat Variable | Steepness, Actual °: 40 0° 1-5° <5-25° >25°

Field Alliance name: *Artemisia californica* (salvia leucophylla)

Comments: Dense stand of A. californica, w/ a few other shrubs mixed in. Not much herb layer, Baccharis on edge to West. Road cuts through. Mixed oak on N facing slope to S.

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	% cover
S	CA. Sage	30	H	Stipa sp.	1										
S	Eriogonum fasc.	10	S	Lonicera	r										
S	S. mellifera	1	S	Bush Monkey G-lw	r										
S	Peas weed	2													

acrispon glaber

Acemispoglaber

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH 007
 UID:
 Location Name: Hollister-Adobe

GPS Name _____ Projected? No / ☒ Yes / Base / Digitized
 If Yes, enter: Bearing (°): 290 Distance (m): 70 Inclination (°): 0
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error (ft) m./ PDOP 20
 UTM's: UTME _____ UTMN _____
 Decimal degrees: LAT 36.787549 LONG - 121.435449

Stand Size: <1 1-5 >5 Camera: MP phone Photos: from View Radius 70

Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: _____ 0° (1-5) >5-25° >25

Field Alliance name: _____

Comments: Willow stand in the midst of live oak & valley oak. Lots of poison oak, small stand mostly excluding live oak. Generally not as many willows in rest of riparian area.

% Cover: Conifer		Hardwood	Total Tree	Regen Tree	Shrub	Herb	Total Veg	Exotics (L,M,H)
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Tox. divers.	17		Sorlix spp.	10			
	Q. lobata	3		Bacch pilularis	10			
	Q. agrifolia	3						

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH008
 UID:
 Location Name: Hollister-Adobe

GPS Name M Projected? ☒ No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error (ft) m./ PDOP 19
 UTM's: UTME _____ UTMN _____
 Decimal degrees: LAT 36.785229 LONG - 121.435044

Stand Size: <1 1-5 >5 Camera: MP phone Photos: (N) View Radius 40

Exposure, Actual °: ~~30~~ NE NW SE SW Flat Variable | Steepness, Actual °: 30 0° 1-5° ~~25~~ >25

Field Alliance name: Quercus agrifolia Forest + Woodland

Comments: Coast live oak stand. Pig damage present. Lots of poison oak in understory. Variable slopes throughout stand, variable density of understory, but live oak cover is consistent. Chosen as representative of pure live oak, not mixed w/ Q. lobata

% Cover: Conifer		Hardwood	Total Tree	Regen Tree	Shrub	Herb	Total Veg	Exotics (L,M,H)
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
T	Quercus agrifolia	40	S	Rosa californica	1	H	Stachys bulata	1
S	Toxicodendron diversiloba	10	S	Ribes cal.	1	H	Claytonia perfoliata	3
T	Quercus lobata	2	S	Baccharis pilularis	1	H	Sanicula crassicalis	1
T	Aesculus californicus	3	S	Symphoricarpos albus	1	H	Adelphia grande	1

S. frum. Yulsterma... r

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH009
 UID:
 Location Name: Hollister Upper Ranch

GPS Name: MPPhone Projected? No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error (ft) m / PDOP 19
 UTM's: UTM _____ UTMN _____
 Decimal degrees: LAT 36.749665 LONG - 121.411126

Stand Size: <1 (1-5) >5 Camera: MP phone Photos: 2N from road View Radius 70m

Exposure, Actual °: 120 NE NW (SE) SW Flat Variable | Steepness, Actual °: 20 0° 1-5° (5-25) >25

Field Alliance name: Aderostoma fasc. - Salvia spp.

Comments: charisee w. black sage + buckbrush (which are new compared to charisee in thicket + adobe). Steep dry slopes. Buck brush stands out b/c it is flowering, but its very patchy, + seems to be on Eastern aspect rather than SE

% Cover: Conifer 0 Hardwood 0 Total Tree 0 Regen Tree 0 Shrub 40 Herb <1 Total Veg 40 Exotics (L,M,H) L								
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Aderostoma fasciculata	25				H	Morpha filicoides	r
S	Salvia malifera	22	*S	Heteromyles arbutifolia	<1	S	Toxicoscordion fremontii	r
S	Artemisia cal.	2	S	Toxicodendron diversiloba	<1	H	Eriophyllum confertiflorum	r
*S	Ceanothus cuneatus (patchy)	5	S	Adonis sp. globosa	<1			

Recorder: MVP Other Surveyors: LG, Mason Date: 4-21 Return? ☐

Waypoint ID: HH010
 UID:
 Location Name: Hollister Upper Ranch

GPS Name: MPPhone Projected? No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error (ft) m / PDOP 20
 UTM's: UTM _____ UTMN _____
 Decimal degrees: LAT 36.747415 LONG - 121.416090

Stand Size: <1 (1-5) >5 Camera: MP phone Photos: 2N View Radius 50m

Exposure, Actual °: 11 (NE) NW SE SW Flat Variable | Steepness, Actual °: 27 0° 1-5° >5-25° (25)

Field Alliance name: Quercus agrifolia

Comments: live oak stand w. dense understory, diff. spp. than Adobe + thicket. Thick layer of litter. Patches oak on ground in canopy. Moss on ground + on branches. Cool + moist area. No weeds. Feels undisturbed. Standing + down dead wood. (woodrat nest)

% Cover: Conifer 0 Hardwood 30 Total Tree 30 Regen Tree <1 Shrub 30 Herb 10 Total Veg 48 Exotics (L,M,H) L								
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
T	Quercus agrifolia	30	S	Holodiscus discolor	5	H	Dryopteris arguta	6
S	Fraxinus cal.	1	S	Toxicoscordion diversiflorum	13	S	Symphoricarpos mollis	8
S	Rhamnus californica	12	H	Leymus condensatus	r	H	Adelina grande	r
S	Heteromyles arbutifolia	r				H	Galium sp.	r

hi leaf litter

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Do we lose
CA sage as we
transition from low
to high
chapparral?

Recorder: MVP Other Surveyors: MP, LG, Masan Date: 4-21 Return? ☐

Waypoint ID: HH011
UID:
Location Name: Hollister-
upper ranch

GPS Name no phone Projected? ☒ No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: 0 ft / m / PDOP 19
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.746287 LONG -121.415592

Stand Size: <1 1-5 >5 Camera: no phone Photos: see comments View Radius 140

Exposure, Actual °: 70 NE NW SE SW Flat Variable | Steepness, Actual °: 23 0° 1-5° >5-25° >25

Field Alliance name: C. cuneatus shrubland alliance.

Comments: from photo pt, viewing 190-270°, up the hill. Didn't go into stand. Buckbrush + C. oliganthus really stand out in flower. Not many other spots with this high cover of C. cuneatus

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover	
	C. cuneatus				Garrya sp.				(Trichostema lanatum)						
	Buckbrush	25			Silktassel	<1			woody blue				curls @ edge	<1	
	C. oliganthus	2			Clematis	<1			carococosa				betuloides	<1	
	A. fasciculatum	30			Salvia mellifera	5									

Recorder: MVP Other Surveyors: MVP, LG, Masan Date: 4-21 Return? ☐

Waypoint ID: HH0012
UID:
Location Name: Hollister
-upper Ranch

GPS Name MVP Phone Projected? ☒ No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: 0 ft / m / PDOP 18
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.744753 LONG -121.419604

Stand Size: <1 1-5 >5 Camera: no phone Photos: Looking down slope View Radius _____

Exposure, Actual °: 4 NE NW SE SW Flat Variable | Steepness, Actual °: 45 0° 1-5° >5-25° >25

Field Alliance name:

Comments: Top of Hector Heights, looking down N facing slope. Exposed bedrock / boulders, very very steep - 45°. Poison oak thick + tall.

% Cover: Conifer		Hardwood		Total Tree		Regen Tree		Shrub		Herb		Total Veg		Exotics (L,M,H)	
Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover	
	T. diversilobum	30			Clematis	4			C. oliganthus	<1					
	H. arbutifolia	9			Prunus	<1			S. mellifera	r					
	C. betuloides	3			Ceanothus	2			Scrophularia	r					
	S. nigra	<1			Garrya sp.	1			Phacelia	r					

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: _____ Other Surveyors: _____ Date: 4-22 Return? ☐

Waypoint ID: HH013 Projected? No / Yes / Base / Digitized

GPS Name _____ If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____

UID: _____ If Yes or Digitized, enter: Base Waypoint ID: _____

Location Name: _____ Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: (ft./m./PDOP) 30

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 36.771254 LONG -121.411798

Stand Size: <1 (1-5) >5 Camera: _____ Photos: _____ View Radius 50

Exposure, Actual °: 10 NE NW SE SW Flat Variable | Steepness, Actual °: 2 0° (1-5°) >5-25° >25

Field Alliance name: Orchard-escaped walnuts with *Pracemosa* - *Q. agrifolia* woodland

Comments: Sycamores, plus live oak + willows, with lots of walnut, Walnut orchards nearby historic, so these walnuts could be native or escaped cultivar. Will try to ID. Thick shrub layer of snowberry, willows - some taller some shrubby. Some nestles thick leaf litter. Some disturbance + exotics - less pristine than others b/c we are near road + park activity.

% Cover: Conifer			Hardwood			Total Tree			Regen Tree			Shrub			Herb			Total Veg 30			Exotics (L,M,H)			M		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	<i>P. racemosa</i>	2		<i>Sambucus nig.</i>	<1																					
	<i>Q. agrifolia</i>	5		<i>Symph. albus</i>	5																					
	<i>Juglans</i> sp.	7		<i>A. douglasii</i>	2																					
	<i>Salix</i> sp.	6		<i>Rubus. ursinus</i>	3																					

* Sycamores not fully leafed out

Recorder: _____ Other Surveyors: _____ Date: 4-22 Return? ☐

Waypoint ID: HH014 Projected? No / Yes / Base / Digitized

GPS Name _____ If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____

UID: _____ If Yes or Digitized, enter: Base Waypoint ID: _____

Location Name: Hubner Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft./m./PDOP _____

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 36.777727 LONG -121.405520

Stand Size: <1 (1-5) >5 Camera: _____ Photos: _____ View Radius 40

Exposure, Actual °: _____ NE NW SE SW Flat Variable | Steepness, Actual °: 0° (1-5°) >5-25° >25

Field Alliance name: *Platanus racemosa* - *Quercus agrifolia* Woodland Alliance

Comments: Sycamores, with buckeye + valley oak. Thick poison oak understory. Thick sycamore leaf litter. Patches of snowberry. Dead conium on east side, some grasses from nearby upland. Creek is dry. Note sycamores are not fully leafed out, cover will be higher. Edges slope gently, ~1-5°. One downed sycamore trunk

% Cover: Conifer			Hardwood			Total Tree 18			Regen Tree <1			Shrub 22			Herb 1			Total Veg 30			Exotics (L,M,H)			M		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	<i>P. racemosa</i>	7		<i>Art. calif.</i>	21																					
	<i>Aesc. cal.</i>	5		<i>T. diversilob.</i>	20																					
	<i>Juglans</i> sp.	1		<i>Symph. albus</i>	2																					
	<i>Q. lobata</i>	6		<i>B. pilularis</i>	<1																					

Sambucus nigra <1

Grasses r

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MD		Other Surveyors: LG, Mason		Date: 4-22		Return? <input type="checkbox"/>	
Waypoint ID: H015		GPS Name _____		Projected? No / Yes / Base / Digitized <u>see map</u>			
UID:		If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____					
Location Name: Hollister - Granitic		If Yes or Digitized, enter: Base Waypoint ID: _____					
		Base / Projected (circle one) Record either UTM's or Decimal Degrees		GPS error: ft./ m./ PDOP _____			
		UTMs: UTM _____ UTMN _____					
		Decimal degrees: LAT <u>36.764489</u> LONG <u>-121.451846</u>					
Stand Size: <1 1-5 <u>5</u>		Camera: _____		Photos: from opposite hill		View Radius _____	
Exposure, Actual °: <u>100°</u> NE NW <u>SE</u> SW Flat Variable Steepness, Actual °: <u>34</u> 0° 1-5° >5-25° <u>25</u>							
Field Alliance name: "entrenched" chamise-black sage							
Comments: View of chamise-black sage chaparral, from opposite hillside. Other components significant. Ceanothus oliganthus & Bush poppy also here, on trail. Steeply sloping, very dry, rocky, very dense tall chamise. True rock outcrops. Doesn't seem to be much herb layer							
% Cover: Conifer <u>0</u> Hardwood _____ Total Tree _____ Regen Tree _____ Shrub <u>51</u> Herb <u>18</u> Total Veg <u>53</u> Exotics (L,M,H) L							
Strata	Species	% cover	Strata	Species	% cover	Strata	Species
S	Adenostoma f.	30	S	Prunus ilicifolia	r	T	Quercus agrifolia
S	Cordia mel.	15	S	Ceanothus cuneatus	2		Q. wislizenii
S	Garrya elliptica	4	S	Diplocarpus laurifolius	r		Trichostema b. b. b.
S	Arctostaphylos crumena	5	S	Heteromeles arb.	r		Ceanothus leucodermis
							T. divers.

Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)

11
50
77

For Office Use:		Final database #:	Final vegetation type:	Alliance Association
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION				
Database #: HH016	Date: 4/22	Name of recorder: Melissa Patten		
	UID:	Other surveyors: Leah Gardner, Mason		
		Location Name: Hollister - Granite		
GPS name: MVP Phone		For Relevé only: Bearing°, left axis at ID point ____ of Long / Short side		
UTME _____		UTMN _____		
		Zone: 11 NAD83 GPS error: ft/ m/ PDOP _____		
Decimal degrees: LAT 36.779902		LONG 121.467868		
GPS within stand? <input checked="" type="checkbox"/> Yes / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____				
and record: Base point ID ____ Projected UTMs: UTME ____ UTMN ____				
Camera Name: MVP Phone Cardinal photos at ID point: <input checked="" type="checkbox"/> N				
Other photos:				
Stand Size (acres): <1, 1-5, >5 Plot Area (m²): 100 / ____ Plot Dimensions ____ x ____ m RA Radius 30 m				
Exposure, Actual °: 120° NE NW <input checked="" type="checkbox"/> SE SW Flat Variable Steepness, Actual °: 19° 0° 1-5° <input checked="" type="checkbox"/> 5-25° >25°				
Topography: Macro: top <input checked="" type="checkbox"/> upper mid lower bottom Micro: <input checked="" type="checkbox"/> convex flat concave undulating				
Geology code: GRAN Soil Texture code: mels Upland or Wetland/Riparian (circle one)				
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)				
H2: <input checked="" type="checkbox"/> BA Stems: <input checked="" type="checkbox"/> Litter: 21 Bedrock: <input checked="" type="checkbox"/> Boulder: <input checked="" type="checkbox"/> Stone: <input checked="" type="checkbox"/> Cobble: <input checked="" type="checkbox"/> Gravel: 47 Fines: 30 =100%				
% Current year bioturbation <1 Past bioturbation present? Yes / <input checked="" type="checkbox"/> No % Hoof punch <input checked="" type="checkbox"/>				
Fire evidence: Yes / <input checked="" type="checkbox"/> No (circle one) If yes, describe in Site history section, including date of fire, if known.				
Site history, stand age, comments:				
Chamise with sanoma sage in shady spots under chamise. Other shrubs scattered throughout. Seems undisturbed. No known fire history. Shrubs appear stunted from poor soil. Lots of bare ground.				
some litter nearby from roadside. cutting brush by roadside, just outside stand				
Disturbance code / Intensity (L,M,H): 19 / 1 / 1 / 1 / 1 / 1 "Other" <input checked="" type="checkbox"/> Final treatment / L				
II. HABITAT DESCRIPTION				
Tree DBH: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)				
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)				
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.)				
Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)				
Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)				
III. INTERPRETATION OF STAND				
Field-assessed vegetation Alliance name: Chamise Chamise Sanoma sage				
Field-assessed Association name (optional): Chamise - / Sanoma sage				
Adjacent Alliances/direction: See # HH017 / SE				
Confidence in Alliance identification: L M H Explain:				
Phenology (E,P,L): Herb P Shrub mix Tree Other identification or mapping information:				

(Revised March 27, 2018)

SPECIES SHEET

% NonVasc cover: 1 Total % Vasc Veg cover: 33

Height classes: 1= $\leq 1/2$ m, 2=1/2-1m, 3=1-2m, 4=2-5m, 5=5-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10= ≥ 50 m

% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Subclub?

Unusual species:

Recorder: MVP Other Surveyors: LG, Mason Date: 4-22 Return? ☐

Waypoint ID: HH017
UID:
Location Name: Hollister
Granitic

GPS Name _____ Projected? No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft./ m./ PDOP _____
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.778141 LONG -121.468409

Stand Size: <1 (1-5) >5 Camera: MP phone Photos: taken from hill, 200m North View Radius _____

Exposure, Actual °: 344 NE NW SE SW Flat Variable | Steepness, Actual °: 25 0° 1-5° >5-25° >25

Field Alliance name: Q. wislizeni - Q. chrysolepis shrubland Alliance

Comments: Dense Q. wislizeni + other shrubs on N facing slopes. Tall, 2-3 meters, very dense in side view, not much herb layer. Hard to get into, but walked edge near HH016, then viewed next stand over.

% Cover: Conifer			Hardwood			Total Tree			Regen Tree			Shrub 60			Herb 41			Total Veg 60			Exotics (L,M,H)			L		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover			
	Q. wislizeni	28		Garrya elliptica	4		Tox divers	1																		
	C. cuneatus	25		Bush poppy	<1																					
	C. papillosus	1		Ericameria barbores	1																					
	A. fasciculatum	1		Acc. crustacea	12																					

Crustacea

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP Other Surveyors: MP, LG, Mason Date: 4-22 Return? ☒ camping spot!

Waypoint ID: HH018
UID:
Location Name: Nature preserve
(Granitic)

GPS Name MP phone Projected? No / Yes / Base / Digitized
If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
If Yes or Digitized, enter: Base Waypoint ID: _____

Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft./ m./ PDOP _____
UTMs: UTM _____ UTMN _____
Decimal degrees: LAT 36.766504 LONG -121.449057

Stand Size: <1 (1-5) >5 Camera: MP phone Photos: (2N) View Radius 30

Exposure, Actual °: 80 NE NW SE SW Flat Variable | Steepness, Actual °: 4 0° 1-5° >5-25° >25

Field Alliance name: Acer macrophyllum? but descr. isn't perfect

Comments: Beautiful riparian corridor in nature preserve. Dense + layered, very diverse. Some water in creek, large rocks in stream bed. Some downed trees. Madrones, Sycamores, oaks all similar height, ~40 ft

% Cover: Conifer 0			Hardwood 25			Total Tree 25			Regen Tree 5			Shrub 30			Herb 5			Total Veg 65			Exotics (L,M,H)			L		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover			
T	P. racemosa	20	T	Acer macrophyllum	10																					
T	Q. agrifolia	10	S	Rubus parviflorus	1																					
T	A. menziesii	7	S	Tox. diversilobum	10																					
S	Western azalea	5		Dryopteris arguta	1																					

Return? ☐

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: MVP		Other Surveyors: Scott Soares		Date: 4-23 Return? <input type="checkbox"/>	
Waypoint ID: HH019		GPS Name MP phone Projected? <input checked="" type="radio"/> No / Yes / Base / Digitized			
UID:		If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____			
Location Name: Hollister Granitic		If Yes or Digitized, enter: Base Waypoint ID: _____			
		Base / Projected (circle one) Record either UTM's or Decimal Degrees GPS error: ft./ m./ PDOP 19			
		UTMs: UTM _____ UTMN _____			
		Decimal degrees: LAT 36.779355 LONG -121.960455			
Stand Size: <input checked="" type="radio"/> 1-5 >5		Camera: Photos: 24		View Radius 40m	
Exposure, Actual °: _____ NE NW SE SW Flat Variable Steepness, Actual °: ^{variable} 0° 1-5° <input checked="" type="radio"/> 5-25° >25					
Field Alliance name: Acer macrophyllum Forest + Woodland Alliance					
Comments: Madrone, Maple, open canopy, No water in creek, upland species encroaching, Multiple snags, Trail along one side of creek, steep canyon walls, stream flows NE 10°, side slope ~40°					
% Cover: Conifer _____ Hardwood 25 Total Tree 25 Regen Tree r Shrub 12 Herb 15 Total Veg 50 Exotics (L,M,H) M					
Strata	Species	% cover	Strata	Species	% cover
T	Madrone	10	S	Q. chrysolepis	2
T	Acer macrophyllum	15		Taxon	<1
T	Q. agrifolia	2		sticky Monkeyflower	4
S	Holodiscus discolor	1		B. pilularis	r
S	Rubus ursinus	3		Woodwardia	5
A	M. facemosa	r		Tox. divers.	1
				Pt. aquilinum	4
				polypody fern	r
Recorder:		Other Surveyors:		Date: Return? <input type="checkbox"/>	
Waypoint ID:		GPS Name _____ Projected? No / Yes / Base / Digitized			
		If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____			

maiden hair fern + scale
Elymus canadensis
1

Combined Vegetation Rapid Assessment and Relevé Field Form
(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type:	Alliance _____ Association _____
I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION			circle: <u>Relevé</u> or RA
Database #:	Date:	Name of recorder:	
<u>44020</u>	<u>5-16-22</u>		
	UID:	Other surveyors:	
		Location Name:	
GPS name: <u>MP phone</u> For Relevé only: Bearing°, left axis at ID point _____ of <u>Long</u> / <u>Short</u> side			
UTME _____ UTMN _____ Zone: 11 NAD83 GPS error: ft./m./PDOP _____			
Decimal degrees: LAT <u>36.773440</u> LONG <u>121.413284</u> (<u>North</u> <u>West</u> corner)			
GPS within stand? <u>Yes</u> / No If No, cite from GPS to stand: distance (m) _____ bearing ° _____ inclination ° _____			
and record: Base point ID _____ Projected UTM: UTM _____ UTMN _____			
Camera Name: <u>MP phone</u> Cardinal photos at ID point: <u>2N</u> ; from NW corner, facing plot			
Other photos:			
Stand Size (acres): <1, <u>1-5</u> , >5 Plot Area (m²): <u>100</u> / _____ Plot Dimensions <u>10</u> x <u>10</u> m RA Radius _____ m			
Exposure, Actual °: <u>200</u> NE NW SE <u>SW</u> Flat Variable Steepness, Actual °: <u>19.2</u> 0° 1-5° <u>>5-25°</u> >25			
Topography: Macro: top upper <u>mid</u> lower bottom Micro: <u>convex</u> <u>flat</u> concave undulating			
Geology code: _____ Soil Texture code: <u>MECL</u> <u>Upland</u> or Wetland/Riparian (circle one)			
% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)			
H20: <u>0</u> BA Stems: <u>2</u> Litter: <u>85</u> Bedrock: <u>0</u> Boulder: <u>0</u> Stone: <u>0</u> Cobble: <u>0</u> Gravel: <u>0</u> Fines: <u>13</u> =100%			
% Current year bioturbation <u>0</u> Past bioturbation present? <u>Yes</u> / No % Hoof punch <u>0</u>			
Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.			
Site history, stand age, comments: <u>Seeded off no OHV, history of OHV riding.</u> <u>Non grasses, native forb, some gopher holes</u> <u>from last year, some yellow star thistle</u>			
Disturbance code / Intensity (L,M,H): <u>02</u> / <u>L</u> <u>05</u> / <u>M</u> _____ / _____ / _____ "Other" _____			
II. HABITAT DESCRIPTION			
Tree DBH: <u>T1</u> (<1" dbh), <u>T2</u> (1-6" dbh), <u>T3</u> (6-11" dbh), <u>T4</u> (11-24" dbh), <u>T5</u> (>24" dbh), <u>T6</u> multi-layered (T3 or T4 layer under T5, >60% cover)			
Shrub: <u>S1</u> seedling (<3 yr. old), <u>S2</u> young (<1% dead), <u>S3</u> mature (1-25% dead), <u>S4</u> decadent (>25% dead)			
Herbaceous: <u>H1</u> (<12" plant ht.) <u>H2</u> (>12" ht.)			
Desert Riparian Tree/Shrub: <u>1</u> (<2ft. stem ht.), <u>2</u> (2-10ft. ht.), <u>3</u> (10-20ft. ht.), <u>4</u> (>20ft. ht.)			
Desert Palm/Joshua Tree: <u>1</u> (<1.5" base diameter), <u>2</u> (1.5-6" diam.), <u>3</u> (>6" diam.)			
III. INTERPRETATION OF STAND			
Field-assessed vegetation Alliance name: _____			
Field-assessed Association name (optional): _____			
Adjacent Alliances/direction: _____ / _____ / _____			
Confidence in Alliance identification: L M H Explain: _____			
Phenology (E,P,L): Herb <u>L</u> Shrub _____ Tree _____ Other identification or mapping information: _____			

(Revised March 27, 2018)

SPECIES SHEET

% NonVasc cover: 0 Total % Vasc Veg cover: 12

Regenerating Tree: 0 Shrub: 0 Herbaceous: 12

Regenerating Tree: Shrub: Herbaceous: 1

Height classes: 1=<1/2m, 2=1/2-1m, 3=1-2m, 4=2-5m, 5=5-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10=>50m

% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

[illegible]

Unusual species:

Recorder: _____ Other Surveyors: MP, Leah, Mason, Rachel Date: 5-18-22 Return? ☐

Waypoint ID: H1021 GPS Name _____ Projected? No / Yes / Base / Digitized _____
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 UID: _____ If Yes or Digitized, enter: Base Waypoint ID: _____ see polygon 23?
 Location Name: _____ Base / Projected (circle one) Record either UTM or Decimal Degrees GPS error: ft./ m./ PDOP 19
 UTM: UTME _____ UTMN _____
 Decimal degrees: LAT _____ LONG _____

Stand Size: <1 1-5 >5 Camera: MP phone Photos: from slope point View Radius 75

Exposure, Actual °: 20 (NE) NW SE SW Flat Variable | Steepness, Actual °: 37 0° 1-5° >5-25° >25

Field Alliance name: _____

Comments: Confusing + diverse stand, Hard to tell shrubs apart from a distance, Did go into stand to grab samples but hard to estimate cover from within
Herbaceous understory: ferns, not much grass, marah, sanicula

% Cover: Conifer 0			Hardwood <1			Total Tree <1			Regen Tree 0			Shrub 30			Herb 5			Total Veg 33			Exotics (L,M,H) L		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover						
S	Cercocarpus betuloides	8	S	Marah fabaceae	1	T	Live oak	<1															
S	Nyctanthes arbutifolia	4	S	Diplacus aurantiacus	1	T	buckeye	r															
S	Toxicodendron diversilobum	6	S	Ceanothus cuneatus	3	S	Athenostema	2															
S	Unkn. oak Quercus berberidifolia	5	S	Prunus illicifolia	r	S	Rhamnus crocea	3															

got sample but hard to tell Yes, berberidifolia

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder: _____ Other Surveyors: MP, Leah, Mason, Rachel Date: 5-18-22 Return? ☐

Waypoint ID: H1021 GPS Name _____ Projected? No / Yes / Base / Digitized _____
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 UID: _____ If Yes or Digitized, enter: Base Waypoint ID: _____ see polygon 23?
 Location Name: _____ Base / Projected (circle one) Record either UTM or Decimal Degrees GPS error: ft./ m./ PDOP 19
 UTM: UTME _____ UTMN _____
 Decimal degrees: LAT _____ LONG _____

Stand Size: <1 1-5 >5 Camera: MP phone Photos: from slope point View Radius 75

Exposure, Actual °: 20 (NE) NW SE SW Flat Variable | Steepness, Actual °: 37 0° 1-5° >5-25° >25

Field Alliance name: _____

Comments: Confusing + diverse stand, Hard to tell shrubs apart from a distance, Did go into stand to grab samples but hard to estimate cover from within
Herbaceous understory: ferns, not much grass, marah, sanicula

% Cover: Conifer 0			Hardwood <1			Total Tree <1			Regen Tree 0			Shrub 30			Herb 5			Total Veg 33			Exotics (L,M,H) L		
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover						
S	Cercocarpus betuloides	8	S	Marah fabaceae	1	T	Live oak	<1															
S	Nyctanthes arbutifolia	4	S	Diplacus aurantiacus	1	T	buckeye	r															
S	Toxicodendron diversilobum	6	S	Ceanothus cuneatus	3	S	Athenostema	2															
S	Unkn. oak Quercus berberidifolia	5	S	Prunus illicifolia	r	S	Rhamnus crocea	3															

got sample but hard to tell Yes, berberidifolia

Recorder: _____ Other Surveyors: MP, Mason Date: 5-18-22 Return? ☐

Waypoint ID: _____ GPS Name _____ Projected? No / Yes / Base / Digitized
 If Yes, enter: Bearing (°): _____ Distance (m): _____ Inclination (°): _____
 UID: _____ If Yes or Digitized, enter: Base Waypoint ID: _____
 Location Name: HH 022 Base / Projected (circle one) Record either UTM or Decimal Degrees GPS error: ft./ m./ PDOP _____
 UTM: UTME _____ UTMN _____
 Decimal degrees: LAT _____ LONG _____

Stand Size: <1 1-5 >5 Camera: _____ Photos: _____ View Radius 75

Exposure, Actual °: 40 (NE) NW SE SW Flat Variable | Steepness, Actual °: Varies 1-5° >5-25° >25

Field Alliance name: _____

Comments: Madrone: spring green w/ little azalea patch.
very tall Q. chrysolepis

% Cover: Conifer 2 Hardwood 19 Total Tree 20 Regen Tree <1 Shrub 3 Herb 2 Total Veg Exotics (L,M,H)								
Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
T	Madrone	12		Conifer pine	2			
T	Q. chrysolepis (tall)	8		Azalea	<1			
S	Toyon	4		H. discolor	<1			
S	Poison oak	6						

Accuracy Assessment Field Form Samplers: MP LG Date: 5-19
Mason Nick

HH 023 Polygon ID: 508 Manzanita types Exposure: 240°
within 1 degree slope
Manzanita types (pretty flat)

Field assessed type (Alliance/Association) from mapping key: Manzanita (Artostaphylos crustacea)

Dominant 3 species of highest strata: Absolute cover %:
A. crustacea "Crustacea" 15
A. fasciculatum 10
Sonoma Sage 5

↑ herbaceous or shrubs?
 Notes on fit, alternative types, mapping adjustments etc:
 - Trace or <1 for toyon, Garrya ~~sp.~~ sp. soil, rocky/granitic gravel
 - Small patches, along w/ chamise @ top.
 - Aspect-dependent. More chamise on S facing.
 Q-wis on N facing, manzanita on flats +
 gentle slopes! (N-E NW) mixed w/ a-wis. and
 in chamise except in direct S. facing.
 - could lower MNN to reflect patchiness.

Total herb cover 0
 Total shrub cover 23
 Total tree cover 0
 Total Veg cover _____

~ 30 m x 15 m plot
 emergent conifer pines

Appendix C: Plant species list

Plant species list for Hollister Hills SVRA, assembled from past years of vegetation surveys as well as from this mapping project

Family	Scientific name	Common name(s)	Rarity	Non-native
Aceraceae	<i>Acer macrophyllum</i>	Bigleaf maple		
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>Caerulea</i>	Blue elderberry		
Agavaceae	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soaproot, soap plant		
Alliaceae	<i>Allium crispum</i>	Crisped onion		
Anacardiaceae	<i>Schinus molle</i>	Peruvian pepper tree		*
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Poison oak		
Apiaceae	<i>Anthriscus caucalis</i>	Bur chervil		
Apiaceae	<i>Bowlesia incana</i>	Hoary bowlesia		
Apiaceae	<i>Conium maculatum</i>	Poison hemlock		*
Apiaceae	<i>Daucus pusillus</i>	Rattlesnake weed, wild carrot		
Apiaceae	<i>Foeniculum vulgare</i>	Sweet fennel		*
Apiaceae	<i>Lomatium dasycarpum</i>	Wooly fruited desert parsley		
Apiaceae	<i>Lomatium utriculatum</i>	Common lomatium, hog fennel		
Apiaceae	<i>Osmorhiza occidentalis</i>	Western sweet cicely		
Apiaceae	<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	4.2	
Apiaceae	<i>Perideridia kelloggii</i>	Kellogg's yampah		
Apiaceae	<i>Sanicula arguta</i>	Sharp-toothed sanicle		
Apiaceae	<i>Sanicula bipinnata</i>	Poison sanicle		
Apiaceae	<i>Sanicula bipinnatifida</i>	Purple sanicle		
Apiaceae	<i>Sanicula crassicaulis</i> var. <i>crassicaulis</i>	Pacific sanicle		
Apiaceae	<i>Tauschia hartwegii</i>	Hartweg's tauschia		
Apiaceae	<i>Torilis arvensis</i>	Spreading hedgeparsley		*
Apiaceae	<i>Torilis nodosa</i>	Knotted headgeparsley		
Apocynaceae	<i>Asclepias californica</i> ssp. <i>californica</i>	California milkweed		
Apocynaceae	<i>Asclepias eriocarpa</i>	Woolly milkweed		
Apocynaceae	<i>Asclepias fascicularis</i>	Narrowleaved milkweed		
Aquifoliaceae	<i>Ilex aquifolium</i>	English holly		*
Araliaceae	<i>Aralia californica</i>	California spikenard		
Araliaceae	<i>Hedera canariensis</i>	Algerian ivy		*
Asparagaceae	<i>Asparagus</i> sp.	Asparagus		
Asteraceae	<i>Achillea millefolium</i>	Common yarrow		

Asteraceae	<i>Achyrachaena mollis</i>	Blow wives	
Asteraceae	<i>Agoseria heterophylla</i>	Mountain dandelion	
Asteraceae	<i>Agoseris grandiflora</i>	Bigflower mountain dandelion	
Asteraceae	<i>Anthemis cotula</i>	Mayweed, stinking chamomile	*
Asteraceae	<i>Artemisia californica</i>	California sagebrush	
Asteraceae	<i>Artemisia douglasiana</i>	Mugwort	
Asteraceae	<i>Baccharis glutinosa</i>	Saltmarsh baccharis	
Asteraceae	<i>Baccharis pilularis</i>	Coyote brush	
Asteraceae	<i>Baccharis salicifolia</i>	Mule fat	
Asteraceae	<i>Calycadenia</i> ssp.	Rosin weed	
Asteraceae	<i>Carduus pycnocephalus</i>	Italian thistle	*
Asteraceae	<i>Centaurea calcipatra</i>	Purple starthistle	*
Asteraceae	<i>Centaurea melitenis</i>	Tocalote	*
Asteraceae	<i>Centaurea solstitialis</i>	Yellow starthistle	*
Asteraceae	<i>Cirsium occidentale</i> var. <i>venustum</i>	Red thistle, Venus thistle	
Asteraceae	<i>Cirsium vulgare</i>	Bull thistle	*
Asteraceae	<i>Corethrogyne filaginifolia</i>	California sandaster	
Asteraceae	<i>Crepis</i> sp.	Hawksbeard	
Asteraceae	<i>Cynara cardunculus</i>	Cardoon, artichoke thistle	*
Asteraceae	<i>Ericameria arborescens</i>	Golden fleece	
Asteraceae	<i>Erigeron foliosus</i> var. <i>foliosus</i>	Leafy fleabane	
Asteraceae	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	Golden yarrow	
Asteraceae	<i>Eriophyllum jepsonii</i>	Jepson's wooly sunflower	4.3
Asteraceae	<i>Eurybia radulina</i>	Roughleaf aster	
Asteraceae	<i>Euthamia occidentalis</i>	Western goldenrod	
Asteraceae	<i>Gnaphalim palustre</i>	Lowland cudweed	
Asteraceae	<i>Grindelia hirsutula</i> var. <i>hirsutula</i>	Hirsute gumplant, hairy gumweed	
Asteraceae	<i>Hazardia squarrosa</i> var. <i>squarrosa</i>	Sawtooth goldenbush	
Asteraceae	<i>Helenium puberulum</i>	Rosilla, sneezeweed	
Asteraceae	<i>Hesperervax sparsiflora</i> var. <i>sparsiflora</i>	Erect evax	
Asteraceae	<i>Heterotheca oregona</i> ssp. <i>oregona</i>	Oregon goldenaster	
Asteraceae	<i>Heterotheca sessiliflora</i> ssp. <i>echioides</i>	Hairy goldenaster	
Asteraceae	<i>Holocarpha virgata</i> ssp. <i>virgata</i>	Narrow tarplant, yellowflower tarweed	
Asteraceae	<i>Hypochoeris glabra</i>	Smooth cat's ear	*
Asteraceae	<i>Lactuca biennis</i>	Biennial wild lettuce	*
Asteraceae	<i>Lactuca saligna</i>	Willowleaf lettuce	*

Asteraceae	<i>Lactuca serriola</i>	Prickly wild lettuce	*
Asteraceae	<i>Lagophylla ramosissima</i>	Branched lagophylla	
Asteraceae	<i>Lasthenia californica</i>	California goldfields	
Asteraceae	<i>Logfia filaginoides</i>	California cottonrose	
Asteraceae	<i>Logfia gallica</i>	Narrowleaf cottonrose	
Asteraceae	<i>Madia exigua</i>	Little tarplant, little tarweed	
Asteraceae	<i>Madia gracilis ssp. gracilis</i>	Grassy tarweed, slender tarweed	
Asteraceae	<i>Madia sativa</i>	Coast tarplant, coast tarweed	
Asteraceae	<i>Matricaria discoidea</i>	Pineapple weed	
Asteraceae	<i>Micropus californicus var. californicus</i>	Slender cottonseed, Q tips, Q tip plant	
Asteraceae	<i>Microseris douglasii ssp. douglasii</i>	Douglas' microseris, Douglas' silverpuffs	
Asteraceae	<i>Microseris douglasii ssp. tenella</i>	Slender Douglas' microseris	
Asteraceae	<i>Monolopia major</i>	Cupped monolopia	
Asteraceae	<i>Packera breweri</i>	Brewer's butterweed, Brewer's ragwort	
Asteraceae	<i>Petasites frigidus var. palmatus</i>	Western sweet coltsfoot	
Asteraceae	<i>Pseudognaphalium californicum</i>	Green everlasting, ladies tobacco	
Asteraceae	<i>Pseudognaphalium luteoalbum</i>	Cudweed everlasting, Jersey cudweed	
Asteraceae	<i>Psilocarphus tenellus</i>	Slender woolly heads, slender woolly marbles	
Asteraceae	<i>Rafinesquia californica</i>	California chicory	
Asteraceae	<i>Senecio flaccidus var. douglasii</i>	Shrubby butterweed, bush groundsel	
Asteraceae	<i>Senecio jacobaea</i>	Tansy ragwort	*
Asteraceae	<i>Senecia vulgaris</i>	Common groundsel	*
Asteraceae	<i>Silybum marianum</i>	Milk thistle	*
Asteraceae	<i>Solidago velutina ssp. californica</i>	California goldenrod	
Asteraceae	<i>Sonchus asper</i>	Prickly sowthistle	*
Asteraceae	<i>Sonchus oleraceus</i>	Common sowthistle	*
Asteraceae	<i>Stebbinsoseris heterocarpa</i>	Grassland silverpuffs	
Asteraceae	<i>Symphiotrichum chilense</i>	California aster, Pacific aster	
Asteraceae	<i>Tragopogon porrifolium</i>	Purple salsify	*
Asteraceae	<i>Uropappus lindleyi</i>	Silver puffs	
Asteraceae	<i>Wyethia heleneoides</i>	Gray mule ears	

Berberidiaceae	<i>Berberis pinnata</i> ssp. <i>pinnata</i>	California barberry	
Betulaceae	<i>Alnus rhombifolia</i>	White alder	
Blechnaceae	<i>Woodwardia fimbriata</i>	Giant chain fern	
Boraginaceae	<i>Adelinia grande</i>	Pacific hound's tongue	
Boraginaceae	<i>Amsinckia intermedia</i>	Common fiddleneck	
Boraginaceae	<i>Emmenanthe penduliflora</i>	Whispering bells	
Boraginaceae	<i>Hesperochiron californicus</i>	California hesperochiron	
Boraginaceae	<i>Pectocarya penicillata</i>	Winged combseed	
Boraginaceae	<i>Phacelia californica</i>	Rock phacelia	
Boraginaceae	<i>Phacelia distans</i>	Wild heliotrope, distant phacelia	
Boraginaceae	<i>Phacelia grisea</i>	Grey phacelia	
Boraginaceae	<i>Phacelia nemoralis</i>	Woods phacelia	
Boraginaceae	<i>Phacelia ramosissima</i>	Branching phacelia	
Boraginaceae	<i>Pholistoma auritum</i>	Fiesta flower	
Boraginaceae	<i>Plagiobothrys acanthocarpus</i>	Adobe popcornflower	
Boraginaceae	<i>Plagiobothrys arizonicus</i>	Arizona popcornflower	
Boraginaceae	<i>Plagiobothrys canescens</i> var. <i>canescens</i>	Valley popcornflower	
Boraginaceae	<i>Plagiobothrys reticulatus</i> var. <i>reticulatus</i>	Netted popcornflower	
Boraginaceae	<i>Plagiobothrys trachycarpus</i>	Roughfruited popcornflower	
Brassicaceae	<i>Barbarea orthoceras</i>	American wintercress	
Brassicaceae	<i>Brassica nigra</i>	Black mustard	*
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's purse	*
Brassicaceae	<i>Cardamine californica</i>	Milkmaids	
Brassicaceae	<i>Descurainia pinnata</i>	Western tansy mustard	
Brassicaceae	<i>Erysimum capitatum</i>	Western wallflower	
Brassicaceae	<i>Hirschfeldia incana</i>	Summer mustard	*
Brassicaceae	<i>Lepidium draba</i>	Whitetop	*
Brassicaceae	<i>Lepidium nitidum</i>	Shining peppergrass	
Brassicaceae	<i>Nasturtium officinale</i>	Watercress	
Brassicaceae	<i>Sisymbrium altissimum</i>	Tumble mustard	*
Brassicaceae	<i>Sisymbrium officinale</i>	Hedge mustard	*
Brassicaceae	<i>Thysanocarpus curvipes</i>	Sand fringedpod	
Caprifoliaceae	<i>Lonicera hispidula</i>	Hairy honeysuckle, pink honeysuckle	
Caprifoliaceae	<i>Lonicera subspicata</i> var. <i>denudata</i>	Chaparral honeysuckle	
Caprifoliaceae	<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	Common snowberry	

Caprifoliaceae	<i>Symphoricarpos mollis</i>	Trailing snowberry, creeping snowberry	
Caryophyllaceae	<i>Cerastium glomeratum</i>	Mouse ear chickweed	*
Caryophyllaceae	<i>Minuartia californica</i>	California sandwort	
Caryophyllaceae	<i>Minuartia douglasii</i>	Douglas' sandwort	
Caryophyllaceae	<i>Silene gallica</i>	Windmill pink	*
Caryophyllaceae	<i>Spergularia rubra</i>	Purple sandspurry	*
Chenopodiaceae	<i>Chenopodium album</i>	Lambsquarter	*
Chenopodiaceae	<i>Chenopodium californicum</i>	California goosefoot	
Chenopodiaceae	<i>Extriplex joaquiniana</i>	San Joaquin saltplant, San Joaquin spearscale	1B.2
Cistaceae	<i>Crocanthemum scoparium</i> var. <i>scoparium</i>	Peak rushrose	
Convolvulaceae	<i>Calystegia collina</i> ssp. <i>venusta</i>	South Coast Range morning glory	4.3
Convolvulaceae	<i>Calystegia occidentalis</i> ssp. <i>occidentalis</i>	Western morning glory	
Convolvulaceae	<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	Pacific false bindweed	1B.2
Convolvulaceae	<i>Calystegia subacaulis</i>	Hill morning glory	
Convolvulaceae	<i>Convolvulus arvensis</i>	Field bindweed	*
Cornaceae	<i>Cornus sericea</i> ssp. <i>sericea</i>	Creek dogwood	
Crassulaceae	<i>Crassula aquatica</i>	Water pygmyweed	
Crassulaceae	<i>Crassula connata</i>	Sand pygmyweed	
Crassulaceae	<i>Dudleya cymosa</i>	Canyon liveforever	
Cucurbitaceae	<i>Marah fabaceus</i>	California man-root	
Cupressaceae	<i>Calocedrus decurrens</i>	Incense cedar	
Cupressaceae	<i>Juniperus horizontalis</i> var. <i>horizontalis</i>	Creeping juniper	
Cuscutaceae	<i>Cuscuta</i> sp.	Dodder	
Cyperaceae	<i>Carex tumulicola</i>	Foothill sedge	
Cyperaceae	<i>Cyperus eragrostis</i>	Umbrella sedge	
Cyperaceae	<i>Eleocharis macrostachya</i>	Common spikerush	
Cyperaceae	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Tule	
Dennstaediaceae	<i>Pteridium aquilinum</i> var. <i>pubescens</i> Bracken fern DIVISION CONIFEROPHYTA: CONIFERS	Bracken fern	
Dryopteridaceae	<i>Dryopteris arguta</i>	California wood fern, coastal wood fern	
Equisetaceae	<i>Equisetum</i> sp.	Horsetail	
Ericaceae	<i>Arbutus menziesii</i>	Madrone	
Ericaceae	<i>Arctostaphylos crustacea</i> ssp. <i>crustacea</i>	Brittle leaf manzanita	
Ericaceae	<i>Arctostaphylos glauca</i>	Bigberry manzanita	

Ericaceae	<i>Rhododendron occidentale</i> var. <i>occidentale</i>	Western azalea	
Euphorbiaceae	<i>Croton setiger</i>	Dove weed, turkey mullein	
Euphorbiaceae	<i>Euphorbia serpyllifolia</i>	Thymeleaf spurge	
Euphorbiaceae	<i>Euphorbia spathulata</i>	Reticulate seeded spurge	
Euphorbiaceae	<i>Ricinus communis</i>	Castor bean	*
Fabaceae	<i>Acmispon americanus</i>	Spanish lotus	
Fabaceae	<i>Acmispon brachycarpus</i>	Short podded lotus	
Fabaceae	<i>Acmispon glaber</i>	Deerweed	
Fabaceae	<i>Acmispon wrangelianus</i>	Chilean trefoil	
Fabaceae	<i>Astragalus douglasii</i>	Douglas's milkvetch	
Fabaceae	<i>Genista monspessulana</i>	French broom	*
Fabaceae	<i>Lathyrus jepsonii</i> var. <i>californicus</i>	California tule pea	
Fabaceae	<i>Lathyrus vestitus</i> ssp. <i>vestitus</i>	Pacific pea	
Fabaceae	<i>Lupinus albifrons</i> var. <i>albifrons</i>	Silver bush lupine	
Fabaceae	<i>Lupinus bicolor</i>	Miniature lupine	
Fabaceae	<i>Lupinus formosus</i> var. <i>formosus</i>	Summer bush lupine	
Fabaceae	<i>Lupinus hirsutissimus</i>	Stinging lupine	
Fabaceae	<i>Lupinus microcarpus</i> var. <i>densiflorus</i>	Chick lupine	
Fabaceae	<i>Lupinus nanus</i>	Sky lupine	
Fabaceae	<i>Lupinus succulentus</i>	Arroyo lupine	
Fabaceae	<i>Lupinus truncatus</i>	Blunt leaved lupine	
Fabaceae	<i>Medicago polymorpha</i>	Bur clover	*
Fabaceae	<i>Melilotus indica</i>	Annual yellow sweetclover	*
Fabaceae	<i>Pedimelum californicum</i>	California Indian beard	
Fabaceae	<i>Pickeringia montana</i> ssp. <i>montana</i>	Chaparral pea	
Fabaceae	<i>Rupertia physodes</i>	Forest scurfpea	
Fabaceae	<i>Trifolium angustifolium</i>	Narrow leaved clover	*
Fabaceae	<i>Trifolium barbigerum</i> var. <i>barbigerum</i>	Bearded clover	
Fabaceae	<i>Trifolium bifidum</i>	Notchleaf clover	
Fabaceae	<i>Trifolium ciliolatum</i>	Tree clover, foothill clover	
Fabaceae	<i>Trifolium depauperatum</i> var. <i>depauperatum</i>	Cowbag clover	
Fabaceae	<i>Trifolium depauperatum</i> var. <i>truncatum</i>	Dwarf sack clover	
Fabaceae	<i>Trifolium garcilenum</i> var. <i>garcilenum</i>	Pinpoint clover	
Fabaceae	<i>Trifolium hirtum</i>	Rose clover	*
Fabaceae	<i>Trifolium microcephalum</i>	Small headed clover	
Fabaceae	<i>Trifolium oliganthum</i>	Fewflowered clover	

Fabaceae	<i>Trifolium wormskioldii</i>	Coast clover	
Fabaceae	<i>Vicia americana</i> ssp. <i>americana</i>	American vetch	
Fabaceae	<i>Vicia benghalensis</i>	Purple vetch	*
Fabaceae	<i>Vicia sativa</i> ssp. <i>sativa</i>	Spring vetch	*
Fabaceae	<i>Vicia villosa</i> ssp. <i>Villosa</i>	Winter vetch	*
Fagaceae	<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak	
Fagaceae	<i>Quercus berberidifolia</i>	Scrub oak	
Fagaceae	<i>Quercus chrysolepis</i> var. <i>chrysolepis</i>	Canyon live oak	
Fagaceae	<i>Quercus douglasii</i>	Blue oak	
Fagaceae	<i>Quercus Xjolenensis</i>	Jolon oak	
Fagaceae	<i>Quercus kelloggii</i>	Black oak	
Fagaceae	<i>Quercus lobata</i>	Valley oak	
Fagaceae	<i>Quercus wislizenii</i> var. <i>wislizenii</i>	Interior live oak	
Fagaceae	<i>Quercus durata</i> var. <i>durata</i>	Leather oak	
Garryaceae	<i>Garrya elliptica</i>	Wavy silk tassel	
Garryaceae	<i>Garrya flavescens</i>	Ashy silk tassel	
Garryaceae	<i>Garrya fremontii</i>	Fremont silk tassel	
Gentianaceae	<i>Zeltnera davyi</i>	Davy's centaury	
Geraniaceae	<i>Erodium botrys</i>	Long beaked filaree	*
Geraniaceae	<i>Erodium cicutarium</i>	Redstem filaree	*
Geraniaceae	<i>Erodium malacoides</i>	Mediterranean filaree, storks' bill	*
Geraniaceae	<i>Erodium moschatum</i>	Whitestem filaree	*
Geraniaceae	<i>Geranium bicknellii</i>	Bicknell's geranium	
Geraniaceae	<i>Geranium dissectum</i>	Cutleaved geranium	*
Geraniaceae	<i>Geranium molle</i>	Dovefoot geranium	*
Grossulariaceae	<i>Ribes californicum</i> var. <i>californicum</i>	California gooseberry	
Grossulariaceae	<i>Ribes malvaceum</i>	Chaparral currant	
Grossulariaceae	<i>Ribes sanguineum</i> var. <i>glutinosum</i>	Pink flowering currant	
Iridaceae	<i>Iris douglasiana</i>	Douglas' iris	
Iridaceae	<i>Sisyrinchium bellum</i>	Blue-eyed grass	
Juglandaceae	<i>Juglans hindsii</i>	Northern California Black Walnut	
Juglandaceae	<i>Juglans regia</i>	English walnut	*
Juncaceae	<i>Juncus balticus</i> var. <i>balticus</i>	Baltic rush	
Juncaceae	<i>Juncus bufonius</i> var. <i>bufonius</i>	Toad rush	
Juncaceae	<i>Juncus bufonius</i> var. <i>congestus</i>	Clustered toad rush	
Juncaceae	<i>Juncus ensifolius</i> var. <i>ensifolius</i>	Swordleaf rush	
Juncaceae	<i>Juncus tenuis</i> var. <i>congestus</i>	Congested slender rush	
Juncaceae	<i>Juncus xiphioides</i>	Iris leaved rush	
Juncaceae	<i>Luzula comosa</i>	Hairy woodrush	

Lamiaceae	<i>Lamium amplexicaule</i>	Henbit	*
Lamiaceae	<i>Marrubium vulgare</i>	White horehound	*
Lamiaceae	<i>Mentha spicata</i>	Spearmint	*
Lamiaceae	<i>Monardella antonina</i> (?)	San Antonio Hills monardella	J&S, 1993
Lamiaceae	<i>Monardella villosa</i>	Coyote mint	
Lamiaceae	<i>Pogogyne serphlloides</i>	Thymeleaf mesamint	
Lamiaceae	<i>Rosmarinus officinalis</i>	Rosemary	*
Lamiaceae	<i>Salvia columbariae</i>	Chia, chia sage	
Lamiaceae	<i>Salvia mellifera</i>	Black sage	
Lamiaceae	<i>Salvia sonomensis</i>	Creeping sage	
Lamiaceae	<i>Satureja douglasii</i>	Yerba buena	
Lamiaceae	<i>Scutellaria tuberosa</i> ssp. <i>tuberosa</i>	Skullcap	
Lamiaceae	<i>Stachys bullata</i>	California hedgenettle	
Lamiaceae	<i>Trichostema lanatum</i>	Wooly bluecurls	
Lamiaceae	<i>Trichostema lanceolatum</i>	Vinegar weed	
Lauraceae	<i>Umbellularia californica</i> var. <i>californica</i>	California bay	
Liliaceae	<i>Calochortus albus</i>	White fairy lantern	
Liliaceae	<i>Calochortus argillosus</i>	Clay mariposa lily	
Liliaceae	<i>Calochortus venustus</i>	Butterfly mariposa lily	
Liliaceae	<i>Fritillaria affinis</i>	Checker lily	
Liliaceae	<i>Lillium pardalinum</i>	Leopard lily	
Malvaceae	<i>Malacothamnus aboriginum</i>	Indian Valley bush mallow	1B.2
Malvaceae	<i>Malva parviflora</i>	Cheeseweed	
Malvaceae	<i>Malvella leprosa</i>	Alkali mallow	
Marsilaceae	<i>Pilularia americana</i>	Amerian pillwort	
Melanthiaceae	<i>Toxicoscordion fremontii</i> var. <i>fremontii</i>	Fremont's death camas	
Melanthiaceae	<i>Trillium chloropetalum</i>	Giant trillium	
Montiaceae	<i>Calandrinia menziesii</i>	Redmaids	
Montiaceae	<i>Claytonia parvifolia</i> ssp. <i>parviflora</i>	Narrow leaved miner's lettuce, springbank springbeauty	
Montiaceae	<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i> var. <i>perfoliata</i>	Miner's lettuce	
Moraceae	<i>Ficus carica</i>	Common fig	*
Myrsinaceae	<i>Lysimachia arvensis</i>	Scarlet pimpernel	*
Myrtaceae	<i>Eucalyptus globulus</i>	Tasmanian blue gum	*
Oleaceae	<i>Olea europea</i>	Olive	*
Onagraceae	<i>Camissonia micrantha</i>	Small primrose	
Onagraceae	<i>Clarkia affinis</i>	Chaparral clarkia	

Onagraceae	<i>Clarkia purpurea ssp. quadrivulnera</i>	Windecup clarkia	
Onagraceae	<i>Clarkia unguiculata</i>	Elegant clarkia	
Onagraceae	<i>Epilobium canum ssp. canum</i>	California fuchsia	
Onagraceae	<i>Epilobium brachycarpum</i>	Panicled willowherb	
Onagraceae	<i>Epilobium sp. (perennial)</i>	Perennial willowherb	
Onagraceae	<i>Epilobium torreyi</i>	Torrey's willowherb	
Orchidaceae	<i>Piperia elongata</i>	Dense flowered rein orchid	
Orchidaceae	<i>Piperia michaelii</i>	Michael's rein orchid	4.2
Orobanchaceae	<i>Bellardia trixago</i>	Mediterranean lineseed	*
Orobanchaceae	<i>Castilleja affinis var. affinis</i>	Coastal paintbrush	
Orobanchaceae	<i>Castilleja attenuata</i>	Valley tassels	
Orobanchaceae	<i>Castilleja densiflora</i>	Dense owl's clover	
Orobanchaceae	<i>Castilleja exserta ssp. exserta</i>	Purple owl's clover	
Orobanchaceae	<i>Castilleja tenuis</i>	Hairy owl's clover	
Orobanchaceae	<i>Cordylanthus rigidus ssp. rigidus</i>	Rigid bird's beak	
Orobanchaceae	<i>Pedicularis densiflora ssp. densiflora</i>	Indian warrior	
Orobanchaceae	<i>Triphysaria eriantha ssp. eriantha</i>	Butter 'n' eggs, Johnny tuck	
Papaveraceae	<i>Dendromecon rigida</i>	Bush poppy	
Papaveraceae	<i>Eschscholzia californica var. californica</i>	California poppy	
Papaveraceae	<i>Eschscholzia caespitosa</i>	Foothill poppy	
Papaveraceae	<i>Papaver californicum</i>	Fire poppy	
Phymaceae	<i>Diplacus aurantiacus</i>	Bush monkeyflower, sticky monkeyflower	
Phymaceae	<i>Erythranthe cardinalis</i>	Scarlet monkeyflower	
Phymaceae	<i>Erythranthe guttata</i>	Streamside monkeyflower, yellow monkeyflower	
Pinaceae	<i>Pinus coulteri</i>	Coulter pine	
Pinaceae	<i>Pinus radiata</i>	Monterey pine	
Plantaginaceae	<i>Antirrhinum multiflorum</i>	Sticky snapdragon	
Plantaginaceae	<i>Callitriche marginata</i>	Winged water starwort	
Plantaginaceae	<i>Collinsia heterophylla</i>	Chinese houses	
Plantaginaceae	<i>Plantago erecta ssp. erecta</i>	California plantain, dotseed plantain	
Plantaginaceae	<i>Plantago ovata</i>	Wooly plantain	
Plantaginaceae	<i>Veronica peregrina ssp. xalapensis</i>	Purslane speedwell	
Plantaginaceae	<i>Veronica persica</i>	Birdseye speedwell	
Platanaceaea	<i>Platanus racemosa</i>	Western sycamore	
Poaceae	<i>Agrostis exarata</i>	Western bentgrass	
Poaceae	<i>Agrostis pallens</i>	Thingrass	

Poaceae	<i>Agrostis stolonifera</i>	Creeping bentgrass, redtop	*
Poaceae	<i>Aira caryophyllea</i>	Silver hairgrass	*
Poaceae	<i>Alopecurus saccatus</i>	Pacific foxtail	
Poaceae	<i>Avena barbata</i>	Slender wild oat	*
Poaceae	<i>Avena fatua</i>	Wild oat	*
Poaceae	<i>Avena sativa</i>	Wild oat	*
Poaceae	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	
Poaceae	<i>Bromus diandrus</i>	Ripgut grass	*
Poaceae	<i>Bromus hordeaceus</i>	Soft chess	*
Poaceae	<i>Bromus laevipes</i>	Chinook brome, woodland brome	
Poaceae	<i>Bromus madritensis</i> ssp. <i>madritensis</i>	Foxtail brome, foxtail chess	*
Poaceae	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	*
Poaceae	<i>Cynodon dactylon</i>	Bermuda grass	*
Poaceae	<i>Cynosurus echinatus</i>	Dogtail	*
Poaceae	<i>Elymus caput-medusae</i>	Medusa head	*
Poaceae	<i>Elymus condensatus</i>	Giant wild rye	
Poaceae	<i>Elymus glaucus</i>	Blue wildrye	
Poaceae	<i>Elymus multisetus</i>	Big squirreltail	
Poaceae	<i>Elymus triticoides</i>	Beardless wildrye	
Poaceae	<i>Festuca bromoides</i>	Brome fescue	*
Poaceae	<i>Festuca californica</i> var. <i>californica</i>	California fescue	
Poaceae	<i>Festuca microstachys</i>	Small fescue	
Poaceae	<i>Festuca myuros</i>	Rattail fescue	*
Poaceae	<i>Festuca perennis</i>	Italian rye-grass	*
Poaceae	<i>Festuca rubra</i> var. <i>rubra</i>	Red fescue	
Poaceae	<i>Gastridium ventricosum</i>	Nitgrass	*
Poaceae	<i>Hordeum depressum</i>	Low barley	
Poaceae	<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley	*
Poaceae	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley, foxtail barley	*
Poaceae	<i>Koeleria macrantha</i>	Junegrass	
Poaceae	<i>Lamarckia aurea</i>	Goldentop	*
Poaceae	<i>Melica californica</i>	California melic grass	
Poaceae	<i>Melica imperfecta</i>	Coast range melic	
Poaceae	<i>Melica torreyana</i>	Torrey's melic	
Poaceae	<i>Paspalum dilatatum</i>	Dallis grass	*
Poaceae	<i>Phalaris aquatica</i>	Harding grass	*
Poaceae	<i>Phalaris canariensis</i>	Canarygrass	*
Poaceae	<i>Phalaris paradoxa</i>	Hood canarygrass	*

Poaceae	<i>Poa annua</i>	Annual bluegrass	*
Poaceae	<i>Poa secunda</i> ssp. <i>secunda</i>	One sided bluegrass, pine bluegrass	
Poaceae	<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	*
Poaceae	<i>Stipa cernua</i>	Nodding needlegrass	
Poaceae	<i>Stipa lepida</i>	Foothill needlegrass	
Poaceae	<i>Stipa miliacea</i>	Smilo grass	*
Poaceae	<i>Stipa pulchra</i>	Purple needlegrass	
Poaceae	<i>Trisetum canescens</i>	Tall trisetum, nodding oatgrass	
Polemoniaceae	<i>Collomia heterophylla</i>	Variable leaf collomia	
Polemoniaceae	<i>Gilia achilleifolia</i>	California gilia	
Polemoniaceae	<i>Leptosiphon androsaceus</i> ssp. <i>androsaceus</i>	False babystars	
Polemoniaceae	<i>Leptosiphon ciliatus</i> var. <i>ciliatus</i>	Whickerbrush	
Polemoniaceae	<i>Leptosiphon parviflorus</i>	Variable linanthus	
Polemoniaceae	<i>Navarretia atractyloides</i>	Hollyleaf pincushion	
Polemoniaceae	<i>Navarretia mellita</i>	Sticky navarretia, skunk navarretia	
Polemoniaceae	<i>Navarretia pubescens</i>	Purple navarretia	
Polygonaceae	<i>Eriogonum argillosum</i>	Clay buckwheat	4.3
Polygonaceae	<i>Eriogonum elongatum</i> var. <i>elongatum</i>	Long stemmed buckwheat	
Polygonaceae	<i>Eriogonum fasciculatum</i> ssp. <i>fasciculatum</i>	California buckwheat	
Polygonaceae	<i>Eriogonum nortonii</i>	Pinnacles buckwheat	1B.3
Polygonaceae	<i>Eriogonum nudum</i> var. <i>auriculatum</i>	Auriculed barestem buckwheat	
Polygonaceae	<i>Polygonum aviculare</i> ssp. <i>depressum</i>	Prostrate knotweed	*
Polygonaceae	<i>Pterostegia drymarioides</i>	Fairy mist	
Polygonaceae	<i>Rumex acetosella</i>	Sheep sorrel	*
Polygonaceae	<i>Rumex conglomeratus</i>	Clustered dock	*
Polygonaceae	<i>Rumex crispus</i>	Curly dock	*
Polygonaceae	<i>Rumex pulcher</i>	Fiddle dock	*
Polypodiaceae	<i>Polypodium californicum</i> var. <i>californicum</i>	California polypody	
Primulaceae	<i>Primula clevelandii</i>	Padre's shooting star	
Primulaceae	<i>Primula hendersonii</i>	Henderson's shooting star	
Pteridaceae	<i>Adiantum jordanii</i>	California maidenhair fern	
Pteridaceae	<i>Pellaea andromedaefolia</i> var. <i>andromedaefolia</i>	Coffee fern	
Pteridaceae	<i>Pellaea mucronata</i>	Birdfoot cliffbrake, birdfoot fern	

Pteridaceae	<i>Pentagramma triangularis</i> var. <i>triangularis</i>	Gold back fern	
Ranunculaceae	<i>Clematis lasiantha</i>	Pipestem clematis	
Ranunculaceae	<i>Clematis ligusticifolia</i> var. <i>californica</i>	California pipestem clematis	
Ranunculaceae	<i>Delphinium parryi</i>	Parry's larkspur	
Ranunculaceae	<i>Delphinium patens</i> ssp. <i>patens</i>	Zigzag larkspur	
Ranunculaceae	<i>Ranunculus californicus</i>	California buttercup	
Ranunculaceae	<i>Ranunculus hebecarpus</i>	Delicate buttercup	
Ranunculaceae	<i>Ranunculus muricatus</i>	Pricklefruit buttercup	*
Rhamnaceae	<i>Ceanothus cuneatus</i>	Buck brush	
Rhamnaceae	<i>Ceanothus integerrimus</i>	Deer brush	
Rhamnaceae	<i>Ceanothus oliganthus</i> var. <i>sorediatus</i>	Jim brush	
Rhamnaceae	<i>Ceanothus papillosus</i>	Wartleaf ceanothus	
Rhamnaceae	<i>Frangula californica</i> var. <i>californica</i>	California coffeeberry	
Rhamnaceae	<i>Rhamnus crocea</i> ssp. <i>crocea</i>	Redberry	
Rhamnaceae	<i>Rhamnus ilicifolia</i>	Hollyleaf redberry	
Rosaceae	<i>Adenostoma fasciculatum</i>	Chamise	
Rosaceae	<i>Cercocarpus betuloides</i>	Birchleaf mountain mahogany	
Rosaceae	<i>Hereromeles arbutifolia</i>	Toyon	
Rosaceae	<i>Holodiscus discolor</i>	Ocean spray	
Rosaceae	<i>Oemleria cerasiformis</i>	Oso berry	
Rosaceae	<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	Hollyleaf cherry	
Rosaceae	<i>Rosa californica</i>	California wild rose	
Rosaceae	<i>Rubus parviflorus</i>	Thimbleberry	
Rosaceae	<i>Rubus ursinus</i>	Pacific blackberry	
Rubiaceae	<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	Narrowleaf bedstraw	
Rubiaceae	<i>Galium aparine</i>	Common bedstraw, cleavers	
Rubiaceae	<i>Galium bolanderi</i>	Bolander's bedstraw	
Rubiaceae	<i>Galium californicum</i> ssp. <i>californicum</i>	California bedstraw	
Rubiaceae	<i>Galium nuttallii</i> ssp. <i>nuttallii</i>	Climbing bedstraw	
Rubiaceae	<i>Galium parisiense</i>	Wall bedstraw	*
Rubiaceae	<i>Galium porrigens</i> var. <i>porrigens</i>	Graceful bedstraw	
Ruscaceae	<i>Maianthemum racemosa</i>	False lily of the valley	
Ruscaceae	<i>Maianthemum stellatum</i>	Starry lily of the valley	
Salicaceae	<i>Populus fremontii</i>	Fremont cottonwood	
Salicaceae	<i>Salix laevigata</i>	Red willow	
Salicaceae	<i>Salix lasiandra</i> var. <i>lasiandra</i>	Yellow willow, Pacific willow	
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow	

Sapindaceae	<i>Acer macrophyllum</i>	Bigleaf maple	
Sapindaceae	<i>Aesculus californica</i>	California buckeye	
Saxifragaceae	<i>Lithophragma affine ssp. affine</i>	Woodland star	
Saxifragaceae	<i>Micranthes californica</i>	California saxifrage	
Scrophulariaceae	<i>Scrophularia californica</i>	California bee plant, figwort	
Selaginellaceae	<i>Selaginella bigelovii</i>	Bigelow's spikemoss	
Simaroubaceae	<i>Ailanthus altissima</i>	Tree of heaven	*
Solanaceae	<i>Nicotiana glauca</i>	Tree tobacco	*
Solanaceae	<i>Solanum nigrum</i>	Black nightshade	
Solanaceae	<i>Solanum umbelliferum var. incanum</i>	Blue witch nightshade	
Taxaceae	<i>Torreya californica</i>	California nutmeg	
Taxodiaceae	<i>Sequoia semervirens</i>	Coast redwood	
Themidaceae	<i>Bloomeria crocea ssp. crocea</i>	Common goldenstars	
Themidaceae	<i>Brodiaea elegans ssp. elegans</i>	Elegant harvest brodiaea	
Themidaceae	<i>Dichelostemma capitatum ssp. capitatum</i>	Blue dicks	
Themidaceae	<i>Muilla maritima</i>	Sea muilla	
Themidaceae	<i>Triteleia laxa</i>	Ithuriel's spear	
Themidaceae	<i>Triteleia ixioides</i>	Pretty face	
Typhaceae	<i>Typha latifolia</i>	Broadleaf cattail	
Urticaceae	<i>Urtica dioica</i>	Stinging nettle	
Urticaceae	<i>Urtica urens</i>	Dwarf nettle	*
Valerianaceae	<i>Plectritis ciliosa</i>	Long spurred plectritis	
Valerianaceae	<i>Plectritis congesta</i>	Sea blush	
Verbenaceae	<i>Phyla nodiflora</i>	Turkey tangle frog fruit	
Verbenaceae	<i>Verbena lasiostachys</i>	Western verbena	
Violaceae	<i>Viola pedunculata</i>	Johnny jump up, California golden violet	
Viscaceae	<i>Phoradendron villosum</i>	Oak mistletoe	
Vitaceae	<i>Vitis vinifera</i>	Wine grape	*
Woodsiaceae	<i>Cystopteris fragilis</i>	Fragile fern, brittle fern	

Appendix D: Reconnaissance protocol and field form

Protocols and blank forms for the “Recon” protocol, a shortened version of the Relevé/Rapid Assessment survey protocol, is included here, since it is not published on the VegCAMP website.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE PROTOCOL FOR
RECON FIELD FORM
(March 30, 2017)

This protocol describes the methodology for the reconnaissance technique as recorded in the Recon Field Form dated March 30, 2017. Reconnaissance surveys (recons) are complementary to relevés and rapid assessments, but collect only a small subset of the data gathered using the more detailed methods. Recons are generally used as an aid to digital vegetation mapping, to determine the boundaries of a stand, or to illustrate a particular vegetation signature. For more background on the relevé and rapid assessment sampling methods, see the relevé and rapid assessment protocol at <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18599>.

Definitions of fields in the form

LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Recorder: The full name of the recorder should be provided for the first field form for the day. On successive forms, initials can be recorded.

Other Surveyors: The full name of each person assisting should be provided for the first field form for the day. On successive forms, initials of each person assisting can be recorded.

Date: Date of the sampling.

Return?: Check this box if team members should return to this spot at a later date to take a recon or RA/relevé. This can be used if the phenology is not conducive to identification of the major species, or if there is not enough time to take the survey.

Waypoint ID: The Waypoint ID in this format: GPS device name + date (yymmdd) + time (hhmm). For example, for a survey taken on iPad "V" on March 27 at 1:45 in the afternoon, the Waypoint ID will be "V1803271345."

UID: The ID number of a reference point or polygon which this reconnaissance describes.

Location Name: The name of the property, park, or the location within large holdings (like USFS or BLM properties).

GPS name: The name/number assigned to the GPS unit.

Projected? Yes / No / Base / Digitized: Circle the appropriate option:

Yes - The point is a projected, or offset point. The surveyor used a bearing and distance to project the point to match what they are describing with the survey.

No - The surveyors are in the vegetation they are describing and the point is where the observer was standing for photographs. This location can also be used as a base location for an offset survey.

Base - Base point only. This is where a surveyor was standing when taking an offset survey to describe vegetation not at that point. No plant data or vegetation descriptions are associated with this location. However, cardinal photos taken at this point will be stored in a directory of this name.

Digitized - An offset point was created on the GPS unit without taking bearing and distance readings. This option should only be used when the imagery on the GPS unit is unique and unmistakable.

Bearing (°): The compass bearing from the Base point to the Projected point.

Distance (m): The distance in meters from the Base point to the Projected point, determined by use of a range finder.

Inclination (°): The vertical offset from the Base point to the Projected point.

Base Waypoint ID: For a projected or digitized point, this is the location where the surveyor was standing when the information was collected. Cardinal photographs will be taken at this point and will be stored on the computer under this ID. Photographs of the stand vegetation will be taken from this point and will be stored on the computer under the Projected point's ID.


Base / Projected UTM's or Decimal degrees: If the point is projected or digitized, circle whether the coordinates of the base point or the offset point have been recorded. These will generally be for the offset point.

GPS error: ft./m./PDOP: The accuracy of the GPS location. Record the error reading and circle the appropriate units.

GPS coordinates: Record either UTM coordinates, easting (**UTME**) and northing (**UTMN**), or decimal degrees, **LAT** (latitude) and **LONG** (longitude). Record this information from a GPS unit.

Stand Size: Estimate the size of the entire stand in which the sample is taken and circle the appropriate range. As a measure, one acre is similar in size to a football field.

View Radius: Enter the radius, in meters, of the viewable area of the stand from the survey point; the radius should be a minimum of 20 meters.

Camera/Photos: Write the name camera, JPG numbers, and direction of photos. Take four photos in the main cardinal directions (N, E, S, W) clockwise from the north, from the GPS location. This symbol can be used to indicate the cardinal photos: . If additional photos are taken in other directions, please note the JPG numbers and a description of each photo.

HABITAT AND VEGETATION DESCRIPTION

Field alliance name: Name of alliance following the most recent Manual of California Vegetation (Sawyer, Keeler-Wolf, and Evens 2009), using scientific nomenclature, *e.g.*, *Quercus agrifolia*. An alliance is based on the dominant or diagnostic species of the stand, and usually reflects the uppermost and/or dominant height stratum. A dominant species covers the greatest area. A diagnostic species is consistently found in some vegetation types but not others.

Please note: The field-assessed alliance name may not exist in the present classification, in which case you can provide a new alliance name in this field.

Comments: Briefly describe the stand age/seral stage, disturbance history, nature and extent of land use, and other site environmental and vegetation factors that will aid in the mapping effort.

% Cover:

Conifer: The total cover of all the conifer trees taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute conifer cover, disregarding the overlap¹ of individual trees.

Hardwood: The total cover of all the hardwood trees taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute hardwood tree cover, disregarding the overlap¹ of individual trees.

¹ Porosity reduces the total cover of the canopy. Overlapping strata should not be included in the total cover percent; for instance, if a shrub is growing under a tree, only the cover of the tree will be added into the total; the cover of the shrub will be disregarded, except for the amount by which it fills in the porosity of the tree canopy.

Total Tree: The total cover of all the trees taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute tree cover, disregarding the overlap¹ of individual trees.

Regen Tree: The total foliar cover of seedlings and saplings, disregarding overlap¹ of individual recruits. See seedling and sapling definitions below.

Shrub: The total cover of all the shrubs taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute shrub cover, disregarding the overlap¹ of individual shrubs.

Herb: The total cover of all the herbs taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute herbaceous cover, disregarding the overlap¹ of individual herbs.

Total Veg: The total cover of all vascular vegetation taking into consideration the porosity, or the holes, in the vegetation. This is an estimate of the absolute vegetation cover, disregarding the overlap¹ of the various tree, shrub, and/or herbaceous layers and species.

Exotics (L,M,H): The extent to which the stand is impacted by exotic/non-native species. Divide the total exotic cover (e.g. 25% *Bromus diandrus* + 8% *Bromus madritensis* + 5% *Centaurea melitensis* = 38% total exotics) by the Total Veg cover (e.g. 80% total) and multiply by 100 to get the % relative cover of exotics (e.g. 38% total exotics / 80% total cover = 48% relative exotic cover). **L** = 0-33% *relative* cover of exotics; **M** = 34-66% relative cover, and **H** = >66% relative cover.

Species List and Coverage

List the species that are dominant or that are characteristically consistent throughout the stand. This list is used if there is some uncertainty in the field-assessed alliance name, so the most common species should be listed. In the interests of time and efficiency, this species list should not be exhaustive.

Strata:

T = Tree. A woody perennial plant that has a single trunk.

A = SApling. 1" - <6" dbh and young in age, OR small trees that are <1" dbh, are clearly of appreciable age, and are kept short by repeated browsing, burning, or other disturbance. Includes trees that are re-sprouting from roots or stumps following fire, logging or other disturbance. These re-sprouts may exhibit a shrubby form, with multiple small trunks, but are species that are generally considered trees. If a majority of the trunks are >6" dbh, then the re-sprouts would be recorded under the "Tree" stratum.

E = SEedling. A tree species clearly of a very young age that is < 1" dbh or has not reached breast height. Applies only to trees propagating from seed; re-sprouts are not recorded here even if they meet the size requirements.

S = Shrub. A perennial, woody plant, that is multi-branched and doesn't die back to the ground every year.

H = Herb. An annual or perennial that dies down to ground level every year.

N = Non-vascular. Includes moss, lichen, liverworts, hornworts, cryptogammic crust, and algae.

When one or more tree species are regenerating, the Tree, Seedling and/or Sapling strata may be noted on the same line, e.g.:

Strata	Species	%Cover	C
T/A/E	Quercus douglasii	40/<1/<1	

Species: Use Jepson Manual nomenclature. When uncertain of an identification (which you intend to confirm later) use parentheses to indicate what part of the determination needs to be confirmed. For example, you could write out *Brassica (nigra)* if you are sure it is a *Brassica* but you need further clarification on the specific epithet.

% cover: provide the % absolute aerial cover for each species listed. All species percent covers may total over 100% because of overlap.

Collections: If a species collection is made, it should be indicated in the blank column next to “% cover” with a “C” (for collected). If the species is later keyed out, cross out the species name or description and write the keyed species name in pen on the data sheet. Do not erase what was written in the field, because this information can be used if specimens get mixed up later. If the specimen is then thrown out, add a “T” to the “C” in that column (CT = thrown out after confirmation) or cross out the “C”. If the specimen is kept but is still not confidently identified, add a

“U” to the “C” (CU = collected and unconfirmed). In this case the unconfirmed species epithet should be put in parentheses [e.g. *Hordeum (murinum)*]. If the specimen is kept and is confidently identified, add a “C” to the existing “C” (CC = collected and confirmed). If the specimen is later deposited in an herbarium, add a “D” to the existing “C” (CD = collected and deposited) and note the receiving herbarium.

RECON FIELD FORM (March 6, 2019, with slope/aspect)

Recorder:		Other Surveyors:		Date:		Return? <input type="checkbox"/>																																																																																																																									
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Stand Size: <1 1-5 >5		Camera:		Photos:		View Radius _____																																																																																																																									
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