Hungry Valley SVRA

Vegetation Mapping Report 2023

California State Parks

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Finescale Vegetation Mapping at the SVRAs (arcgis.com)

Introduction

Goals and Purpose

This finescale vegetation map for Hungry Valley SVRA was developed by California State Park staff in 2021-2023. 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

Spring 2021	Conduct field surveys to sample vegetation types
Fall 2022	Preliminary data analysis
Spring 2022	Conduct field surveys to sample vegetation types
Fall 2022	Data analysis and linework to produce a draft map
Spring 2023	Field check of the draft map
Summer 2023	Finalize map

Description of Hungry Valley SVRA

Hungry Valley SVRA is a 19,800 acre park within the Transverse Mountain Ranges, just south of Tejon Pass and the town of Gorman. The park is surrounded by National Forest land and by Tejon Ranch. Before becoming a SVRA in 1980, the park had a history of homesteading, mining, and unofficial OHV use. The climate is semiarid mediterranean, with hot dry summers and winters cold enough for some snowfall. There a few ephemeral streams, a small stream in the southern portion of the park with summer base flow, and a small perennial spring on the western edge of the park.

Methods

Fieldwork

Field surveys were conducted on April 5-8, 2021 by State Park staff, using VegCAMP's standard methods for Relevé, Rapid Assessment, and Reconnaissance samples (Appendix D, CDFW a, CDFW-CNPS). Fifteen formal samples were taken, in addition to many notes and photo points throughout the park. A second set of nineteen formal surveys, plus notes and photo points were taken on April 11-15, 2022 by State Park staff. Additional informal surveys were taken on May 5th 2022 with both state park staff and Chico State Geographic Information Center staff. Lastly, a map check was done by State Park staff on May 1-4, 2023, where 57 polygons that were not confidently identified during the linework process were visited and assessed for vegetation type.

Data interpretation and linework

Hungry Valley SVRA is not covered by any previous CDFW VegCAMP mapping or vegetation classification projects. Additionally, it is located where multiple eco-regions meet, resulting in a unique mixture of plant species and communities that are not yet classified in the National Vegetation Classification System or the Manual of California Vegetation. Existing vegetation classifications from VegCAMP projects in the Mojave Desert (Menke et al., 2013), the Tehachapi Mountains (Klein and Keeler-Wolf, 2014), and the Southern Sierra Nevada Foothills (Reyes et al.,

2022), as well as the alliance descriptions in the Manual of California Vegetation Online (California Native Plant Society) were referenced when classifying vegetation for the park, and CDFW VegCAMP staff were consulted for advice with types that were difficult to fit. Some provisional types were named for the purposes of this project. It is expected that in the future, new classifications will be developed for the region and some of the types here may change to reflect a more appropriate name. See the vegetation key developed for the park below.

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 5-acre minimum mapping unit break for overstory vegetation, and a 10-acre minimum mapping unit break for understory vegetation. Base imagery was NAIP 2020.

Vegetation Types and Descriptions

Table 1. Vegetation Community Types in Hungry Valley SVRA, Surveyed 2021-2023.

Map Code	NVCS Name	Common name (* = Sensitive)		Acres
Tree vegetation types				
1	Pinus monophylla Alliance	Singleleaf pinyon woodland		671
2	Juniperus californica Alliance	California juniper woodland		617
3	Quercus lobata Alliance	Valley oak woodland	*	27
4	Populus fremontii - Fraxinus velutina - Salix gooddingii Alliance	Fremont cottonwood woodland	*	4
5	Populus fremontii - Salix lucida ssp. lasiandra Association	Fremont cottonwood – red willow woodland	*	19
6	Salix laevigata Association	Red willow woodland	*	26
Shrub vegetation types				
7	Salix exigua Alliance	Sandbar willow thickets		5
8	Salix lasiolepis Alliance	Arroyo willow thickets		4
9	Adenostoma fasciculatum Alliance	Chamise chaparral		311
10	Arctostaphylos glauca Alliance	Bigberry manzanita chaparral		60
11	Quercus john-tuckeri Alliance	Tucker oak chaparral		942
12	Quercus john-tuckeri / Juniperus californica / Ericameria linearifolia Association	Tucker oak/California juniper/Interior goldenbush chaparral	*	3,491
13	Quercus john-tuckeri / Pinus monophylla – Pinus sabiniana Provisional Association	Tucker oak/Singleleaf pinyon chaparral (Provisional)	*	1,335
14	Lotus scoparius – Lupinus albifrons – Eriodictyon spp. Alliance	Deerweed-silver lupine-yerba santa scrub		115
15	Ericameria linearifolia - Cleome isomeris Alliance	Interior goldenbush - bladderpod scrub		178

16	Central and South Coastal Californian Coastal Sage Scrub Group	Central and South Coastal Californian Coastal Sage Scrub Group		1,407
17	Eriogonum fasciculatum Alliance	California buckwheat scrub		971
18	Eriogonum fasciculatum – Hesperoyucca whipplei Association	California buckwheat - chaparral yucca scrub		1,913
19	Hesperoyucca whipplei Provisional Alliance	Chaparral yucca scrub (Provisional)	*	34
20	Salvia mellifera Alliance	Black sage scrub		606
21	Lepidospartum squamatum Shrubland Alliance	Scale broom scrub	*	106
22	Encelia (actonii, virginensis) - Viguiera reticulata Shrubland Alliance	Brittle brush scrub	*	10
23	Ericameria cooperi Provisional Alliance	Cooper's goldenbush scrub (Provisional)		653
24	Ephedra viridis Alliance	Mormon tea scrub		104
25	Ericameria nauseosa Alliance	Rubber rabbitbrush scrub		2,176
26	*Artemisia tridentata* Alliance	Big sagebrush		300
27	*Artemisia tridentata – Ericameria nauseosa* Association	Big sagebrush - rubber rabbitbrush scrub		437
28	*Ceanothus greggii - Fremontodendron californicum* Shrubland Alliance	Ceanothus- flannelbush chaparral	*	6
29	Intermontane Deep or Well-drained Soil Scrub Group	Intermontane Deep or Well-drained Soil Scrub Group		11
Herbaceous vegetation types				
30	Mediterranean California Naturalized Annual and Perennial Grassland Group	Mediterranean California Naturalized Annual and Perennial Grassland Group		100
31	California Annual Forb/Grass Vegetation Group	California Annual Forb/Grass Vegetation Group		2,099
32	Eschscholzia californica Association	California poppy fields		702
33	Arid West Freshwater Emergent Marsh Group	Arid West Freshwater Emergent Marsh Group		6
34	Californian Warm Temperate Marsh/Seep Group	Californian Warm Temperate Marsh/Seep Group		3
35	Naturalized Warm-Temperate Riparian and Wetland Group	Naturalized Warm-Temperate Riparian and Wetland Group		9
36	Cliff, Scree, Rock outcrop	Cliff, Scree, Rock outcrop		34
37	Urban	Urban		150
38	Water	Water		1

Vegetation Community Descriptions

Woodland Vegetation Types

Oak Woodland

Valley Oak (*Quercus lobata*) Woodland Alliance: Valley oak (Quercus lobata) is a distinctive tree <30 meters with tall trunks and deciduous lobed leaves. Individual valley oaks exist within Hungry Valley SVRA, including small individuals on the edge of the dry lakebed in the Condor Mesa Area. Large valley oaks also grow within Hungry Valley SVRA in an open woodland in the southeastern portion of the park near the South Entrance and within the Oak Woodland Natural Preserve. A wide variety of shrubs and herbs occur in the understory.

Conifer Woodland

Pinyon Pine (*Pinus monophylla*) Alliance: The pinyon woodland within Hungry Valley SVRA is commonly composed of three dominant species: single leaf pinyon (*Pinus monophylla*), California juniper (Juniperus californica), and Tucker oak (*Quercus john-tuckeri*). The pinyon pines are dominant and diagnostic in the overstory of this community even though their presence may be sparse (sometimes having <5% cover), and they may grow as tall as 15 meters. Other species that co-exist in the shrub layer include big sagebrush (Artemisia tridentata), big berry manzanita (Arctostaphylos glauca), mountain mahogany (*Cercocarpus betuloides*), thick-leaved yerba santa (*Eriodictyon crassifolium*), and rubber rabbitbrush (*Ericameria nauseosa*). This vegetation type grows predominantly on north-facing slopes throughout Hungry Valley SVRA.

California Juniper (Juniperus californica) Alliance: California juniper (*Juniperus californica*) is a small tree that generally grows less than 5 meters tall. Widespread within Hungry Valley SVRA in a variety of habitats, in some areas stands form a near monoculture while in other areas it is mixed with a variety of other species. When co-dominant with pinyon pine or Tucker oak, California juniper must have >60% cover to be classified as the Juniper Alliance. In some cases, the various combinations of species have been described as different associations listed below and in the shrubland classifications. The shrub layer can be open to intermittent, and the herb layer is usually sparse.

California Juniper/California Buckwheat (*Juniperus californica/Eriogonum fasiculatum*) Provisional Association: This vegetation type is widespread within Hungry Valley SVRA, creating cover of open, low woodland that supports the growth of shrubs between the junipers. Sagebrush (*Artemisia tridentata*) and goldenbush (*Ericameria spp.*) may also be mixed with California buckwheat (*Eriogonum fasciculatum*).

Riparian Woodland and Shrubland Types

Fremont Cottonwood Woodlands (Populus fremontii - Fraxinus velutina - Salix gooddingii Alliance; and Populus fremontii - Salix lucida ssp. lasiandra Association): Fremont cottonwoods (*Populus fremontii*) and willows (*Salix sp.*) are winter-deciduous trees that are indicators of wetland habitat, where the tree and shrub vegetation receives moisture from a high water table and groundwater. Fremont cottonwoods grow to heights of < 25 m, forming a continuous to open upper canopy. Within Hungry Valley SVRA, Fremont cottonwoods are limited to a few small drainages and ephemeral streams. In these stands, Fremont cottonwood may have low absolute cover (as low as 5%) and willow species may be co-dominant with equal or higher cover.

Willow (*Sandbar, Red, Black, Arroyo Willow - Salix exigua, S. laevigata, S. gooddingii, S. lasiolepis*) Alliances: Four species of willow can be found within the park, typically in wetlands, riparian zones,

or seasonally moist basins. They may be in pure or mixed stands or in association with Fremont cottonwood and can form shrubby willow thickets or attain treelike stature in the upper canopy. Stands dominated by a single species in the tree canopy are classified as that species type, i.e., Red willow (*Salix laevigata*) Alliance.

Sandbar Willow (*Salix exigua*) Shrubland Alliance: Sandbar willow is a shrub-sized, narrow-leaved willow. It has a general appearance similar to mulefat (*Baccharis salicifolia*), but with different floral features. Within Hungry Valley SVRA, it is found mainly in the northern portion of the Condor Mesa Area in areas of low, flat topography.

Chaparral Vegetation Types

Tucker Oak (*Quercus john-tuckeri*) Alliance: (Note: Per the classification rules in the MCV, Tucker oak is considered a shrub rather than a tree.) Tucker oak is a shrub form of oak, with individuals growing up to 6 meters tall. It generally is an evergreen except during periods of drought, when it may lose some of its leaves. This plant community has Quercus john-tuckeri at > 50% relative cover in the shrub canopy, which can be open to continuous. It is widely distributed throughout the central portion of Hungry Valley SVRA, with large stands along the western boundary.

Tucker Oak/California Juniper/Interior Goldenbush (*Quercus john-tuckeri/Juniperus californica/Ericameria linearifolia*) Association: Tucker oak and California juniper often are found together in Hungry Valley SVRA in locations where conditions are not quite moist enough for single-leaf pinyon pine, especially along the lower slopes of ridges and hills and around the outer portions of valley bottom lands. In some locations, this Association forms a closed canopy of vegetation, but in others, it is somewhat open, with individual shrubs standing apart from one another.

Tucker Oak/Singleleaf Pinyon (*Quercus john-tuckeri/Pinus monophyla*) Provisional Association: Pinyon pine is present throughout, but with lower cover (sometimes <5% absolute cover) than the Tucker oak.

Chamise (*Adenostoma fasciculatum*) Chaparral Alliance: Chamise (*Adenostoma fasciculatum*) has at least 50% relative cover in the shrub canopy, with an intermittent to continuous canopy up to 4 m tall. In Hungry Valley SVRA, chamise mainly occurs in the southern portion on south-facing slopes, especially east of Freeman Canyon and Hungry Valley Road, southwest of Mystic Canyon, as well as along the western boundary, west of Maxey Ranch Road. In some locations, it may form nearly pure stands, but in many areas, it is mixed with other shrubs, especially California buckwheat.

Big Berry Manzanita (*Arctostaphylos glauca*) Chaparral Alliance: Big berry manzanita (*Arctostaphylos glauca*) is a long-lived, evergreen, sclerophyllous shrub that grows up to 6 m. They do not sprout after being top killed from fire. For this Alliance, Arctostaphylos glauca is dominant or co-dominant in the shrub canopy, typically on mid to upper slopes of moderate to high elevations. Chamise (*Adenostoma fasciculatum*) is a common co-dominant shrub along with black sage (Salvia mellifera) and chapparal yucca (*Hesperoyucca whipplei*).

Ceanothus – Flannelbush (*Ceanothus greggii- Fremontedendron californicum*) Shrubland Alliance: Desert ceanothus (*Ceanothus greggii*) has >30% cover in the shrub canopy with flannelbush (*Fremontedendron californicum*) and a diverse mix of other shrubs. Both C. greggii and F.

californicum are components of desert chaparral vegetation that inter-relate with other desert scrub species and pinyon-juniper woodland in post-burn settings. There is one known small stand of this alliance in the northern part of the park.

Other Shrubland Types

Rubber Rabbitbrush (*Ericameria nauseosa*) Shrubland Alliance: Rubber rabbitbrush (*Ericameria nauseosa*) is a fast-growing, early-seral shrub that establishes after disturbance. Rubber rabbitbrush has >50% relative cover in the shrub layer with heights < 3 m; the canopy is open to continuous. The herbaceous layer is sparse or grassy. Rubber rabbitbrush is a dominant species in various locations within Hungry Valley SVRA, particularly in areas that have been disturbed or burned in the past. Rubber rabbitbrush has slender stems with small flower clusters, but its density generates what appears to be a complete yellow flower cover in late summer-early fall. Other species of rabbitbrush and goldenbush (*Ericameria*) may also have a co-dominant role in the areas that are classified as this vegetation community within Hungry Valley SVRA.

Big Sagebrush (*Artemisia tridentata*) Alliance: Artemisia tridentata is dominant in the shrub canopy or may be co-dominant with interior goldenbush or California buckwheat. Shrub height is typically < 2 m and the canopy may be open to continuous. This Alliance occurs in a variety of habitats where soils are sandy to loamy, well drained, and deep. The herbaceous layer is sparse to intermittent and grassy.

Big Sagebrush - Rubber Rabbitbrush (*Artemisia tridentata- Ericameria nauseosa*) Association: Along with the big sagebrush, rubber rabbitbrush (*Ericameria nauseosa*) is one of the more widespread shrubs within Hungry Valley SVRA. This combination of big sagebrush and rubber rabbitbrush shrub vegetation is quite prevalent in Hungry Valley SVRA, especially occurring in the open valleys on the north, west, and southwest sides.

California Buckwheat (*Eriogonum fasciculatum*) Alliance: California buckwheat (*Eriogonum fasciculatum*) is one of the most common shrubs in central and southern California. It is a member of stable vegetation communities, including those that exist in valley bottoms and slopes, where it is the dominant species. It also is able to rapidly colonize areas that have been burned or subjected to mechanical removal and disturbance of soils. Because of its ability to colonize disturbed areas, it often is the dominant species on slopes that have open soil and rock from unstable geology. Within Hungry Valley SVRA, California buckwheat is found in various locations with big sagebrush on the somewhat drier slopes and areas recovering from previous disturbances, such as cattle and sheep grazing and cultivation that occurred before the land was acquired by the park.

Chaparral Yucca (*Hesperoyucca whipplei*) Provisional Alliance: Chaparral yucca (*Hesperoyucca whipplei*) occurs in a wide range of habitats within Hungry Valley SVRA, but the greatest concentrations appear in areas on the upper portion of the gently sloping valleys, below the juniper and pinyon habitats. The chaparral yucca within Hungry Valley SVRA represents atypically high concentrations of large specimens. Each chaparral yucca flowers only once - typically between April -June, after which the entire plant dies. Before flowering, a plant may produce smaller plants ("pups") around the base. Thus, the dead stalk of the original plant may leave behind one or more smaller plants, genetically identical to the original.

California Buckwheat–Chaparral Yucca (*Eriogonum fasciculatum – Hesperoyucca whipplei*) Association: Within Hungry Valley SVRA, particularly in the valleys on the southwestern portion, big sagebrush is present with California buckwheat and chaparral yucca (*Hesperoyucca whipplei*).

Scale Broom (*Lepidospartum squamatum*) – Shrubland Alliance: Scale broom (*Lepidospartum squamatum*) dominates or characterizes open stands with a variety of native and non-native herbs in the understory. Stands are concentrated along washes – usually larger washes with regular flooding where the substrate texture is coarse sand to small cobbles with gravel.

Black Sage (*Salvia mellifera*) Alliance: Black sage (*Salvia mellifera*) is dominant or co-dominant in the shrub canopy < 2 m; the canopy is continuous or intermittent. The herbaceous layer is variable; grasses and herbs are seasonal. Common on dry slopes with shallow soils. Twigs and leaves are glandular and highly aromatic. They are drought tolerant by leaf curling and yellowing rather than through leaf drop but are still considered to have a suite of drought-deciduous characteristics. Winter- and spring-blooming flowers are a rich source of nectar for native and introduced bees.

Interior Goldenbush – Bladderpod (*Ericameria linearifolia – Cleome isomeris*) Shrubland Alliance: Interior goldenbush and bladderpod are co-dominant in the shrub layer. Interior goldenbush (*Ericameria linearifolia*) and bladderpod (*Cleome isomeris aka Cleomella arborea*) are widespread species of inland central and southern California. The former species typically blooms in spring and summer and fruits in summer and fall. The latter can bloom and fruit year-round when moisture is available. These two species are common in the upper Mojave Desert and may become abundant following disturbances, including fire, flooding, and grazing.

Cooper's Goldenbush (*Ericameria cooperi*) Provisional Alliance: Cooper's goldenbush (*Ericameria cooperi*) is evenly distributed and widespread across the park's landscape. This type is provisional and is based on E. cooperi having a significant presence (generally >40% relative cover) in a stand. Stands show evidence of recent disturbance (typically fire) and are usually adjacent to stands with larger and longer-lived shrubs that belong to other Alliances.

Encelia (*Encelia actoni*) Shrubland Alliance: Acton's encelia (*Encelia actonii*) is dominant or co-dominant in the shrub canopy, with ≥2% absolute cover and no other shrub species with greater or equal cover. In the borders of the Transverse and Tehachapi ranges, stands often occur on steep, south-facing slopes associated with Hesperoyucca whipplei or Eriogonum fasciculatum. Habitats include intermittently flooded arroyos, canyons, alluvial fans, road cuts, and other substrates with recent disturbance. Soils are alluvial with cobble and gravel. Encelias are short-lived, drought-deciduous shrubs that grow to 1.5 m tall. Plants reproduce by seeds that are well adapted to wind and water dispersal and plants establish well from seed during wet years. They are early colonizers of sites such as washes, road cuts, recently cleared or burned land, or other disturbances. As a result, populations increase with disturbance and are replaced in areas lacking recurring disturbance.

Mormon Tea (*Ephreda viridis*) Alliance – Mormon Tea (*Ephedra viridis*) has >2% cover as the dominant or codominant shrub with a mix of other associated shrubs. In Hungry Valley, it is found on steep rocky slopes with chaparral yucca (*Hesperoyucca whipplei*).

Deerweed- Silver Lupine- Yerba Santa (*Lotus scoparius, Lupinus albifrons, Eriodictyon spp.*)

Shrubland Alliance: Disturbance-related shrubs (*Eriodictyon crassifolium, Lupinus spp., Lotus scoparius, or others*) dominate the shrub canopy with low to moderate cover. The shrubs reach < 3 m; the canopy is open to intermittent and can be two-tiered. The herbaceous layer is sparse to intermittent. Typical habitats for this Alliance include exposed lower to upper slopes and ridges, moderately steep open settings, and areas with recent disturbance, such as through clearing, fire, or intermittent flooding.

Deerweed (*Lotus scoparius* aka *Acmispon glaber*) is a short-lived shrub that can reach 20 years of age. Bush lupine (*Lupinus albifrons*) is a shrubby lupine with silvery leaves. The flowers are loosely whorled, and the bi-colored purple and white flowers are large and showy. They are relatively short-lived and tend to colonize regularly disturbed, steep and unstable slopes and shifting sands. Both deerweed and bush lupine are nitrogen fixers.

Thick-leaved yerba santa (*Eriodictyon crassifolium*) is a much-branched, evergreen shrub that attains 3 m in height. Branches are tomentose, and the lanceolate leaves are entire to toothed, sparsely hairy to white-tomentose. Seeds collect near plants and form a seed bank; they germinate following disturbance such as fire, and plants die after 20 to 30 years.

Within Hungry Valley SVRA, this vegetation Alliance is expressed as stands dominated by either thick-leaved yerba santa or deerweed. Patches of vegetation dominated by thick-leaved yerba santa are fairly common in the park. Deerweed tends to occur on ridges with thin soils.

Herbaceous Vegetation Types

Arid West Freshwater Emergent Marsh and Warm Temperate Marsh/Seep Groups: Marsh vegetation types are found in permanently wet soils or standing water. Vegetation is dominated by emergent perennial herbs such as rushes (*Juncus spp.*), tules (*Schoenoplectus acutus*), and cattails (*Typha spp.*). There are multiple Alliances and Associations within these groups, and plant assemblages vary annually.

California Annual Forb/Grass Vegetation and Mediterranean California Naturalized Annual and Perennial Grassland Groups: Hungry Valley SVRA supports a large number of grassland species, both native and non-native. Large expanses of grassland comprise the Native Grasslands Management Area and smaller grassland areas are scattered throughout the park. Some stands are strongly dominated by annual non-natives and lack evenly distributed, diagnostic native plants. Other stands are dominated or characterized by annual and perennial grasses and forbs with native herbs being characteristic and evenly distributed across the herbaceous layer, though non-native forbs and grasses may be dominant.

Nonnative grass species include wild oat (*Avena fatua*), slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), soft chess (*Bromus hordeaceous*), and cheat grass (*Bromus tectorum*). Native grass species include creeping wild rye (*Elymus triticoides*), slender wheatgrass (*Elymus trachycaulus*), nodding needlegrass (*Stipa cernua*), purple needlegrass (*Stipa pulchra*), pine bluegrass (*Poa secunda*), desert needlegrass (Stipa speciosa), and Indian rice grass (*Stipa hymenoides*).

Native herbaceous dicots or forbs include California poppy (*Eschscholzia californica*), desert dandelion (*Malacothrix glabrata*), spider lupine (*Lupinus benthamii*), miniature lupine (*Lupinus*

bicolor), baby blue eyes (*Nemophila menziesii*), phacelias (*Phacelia spp.*), fiddeneck (*Amsinckia spp.*), purple owl's clover (*Castilleja exserta*), and many others. Deltoid balsam root (*Balsamorhiza deltoidea*) is a large-flowered herbaceous perennial member of the sunflower family that grows on north-facing grassland slopes within Hungry Valley SVRA near the southern limit of its range, extending northward into Oregon.

The dominant mix of species varies from year to year, depending on rainfall and germination factors. In some years, California poppies may cover extensive areas hundreds of acres in size, visible from long distances. The desert dandelions also create large patches of bright yellow that can be viewed from distant vantage points. All of these native forbs are mixed with native and non-native grasses. However, because the boundaries and mix of the patches of species are highly variable, it is not possible to map them all at the Alliance or Association level using standard mapping methods such as aerial image interpretation, with the exception of the California poppy Alliance.

California poppy (*Eschscholzia californica*) Association: California poppy (*Eschscholzia californica*) is seasonally abundant along with many other native and non-native forbs and grasses such as purple owl's clover (*Castillja exserta*), miniature lupine *(Lupinus bicolor*), fiddlenecks, (*Amsinckia sp.*), phacelia (*Phacelia spp.*), brome grasses (*Bromus spp.*), wild oats (*Avena spp.*), etc. Our state flower contributes significantly to the iconic vision of the state's wildflower displays and "superblooms". However, these stands can shift radically year-to-year in species composition depending primarily on the amount and timing of precipitation.

Vegetation Key

Hierarchical Field and Mapping Key to Hungry Valley SVRA
January 2023

This key is developed by Chico State Geographic Information Center for Hungry Valley SVRA by pulling together the overlapping vegetation community concepts found in the Tehachapi (Klein and Keeler-Wolf, 2014), DRECP (Menke et al., 2013), and Southern Sierra Nevada Foothills (Reyes et al., 2022) mapping projects.

1. Vegetation dominated or characterized by *Juniperus californica* or *Pinus sabiniana*.
   Californian Evergreen Coniferous Forest and Woodland Group
   1a. *Juniperus californica* is evenly distributed and characterizes the tree or shrub canopy with >4% absolute cover. Oaks are typically absent or much lower in cover than *J. californica* in the overstory. Sites tend to be rocky and/or sandy. *Juniperus californica* dominates in an open tree overstory, sometimes with understory shrubs meeting or exceeding *Juniperus* in cover. If co-occurring with *Pinus monophylla* or *Quercus johntuckeri*, *J. californica* must have >60% relative cover to key to the juniper alliance (i.e., if *J. californica* is co-dominant with *Pinus monophylla* or *Quercus john-tuckeri*, key to one of the latter two alliances, respectively). *Cercocarpus montanus* and/or *Hesperyucca whipplei* are characteristically present and may be co-dominant. *Artemisia tridentata*, *Ericameria* spp., *Eriogonum fasciculatum*, and/or *Purshia tridentata* may be present.
      ***Juniperus californica* Alliance**
      Juniperus californica / *Eriogonum fasciculatum* Provisional Association

2. *Pinus monophylla* is the dominant tree or is co-dominant (sometimes having <5% absolute cover) with *Quercus chrysolepis*, *Q. john-tuckeri* or *Juniperus californica* in open woodlands. Understory shrubs may include *Artemisia tridentata*, *Eriogonum fasciculatum*, and *Ephedra* spp.
   Western Great Basin Montane Conifer Woodland Group
      ***Pinus monophylla* – (*Juniperus osteosperma*) Alliance** *Pinus monophylla* – *Juniperus californica* / *Artemisia tridentata* – *Coleogyne ramosissima* Association
      Pinus monophylla / *Quercus john-tuckeri* Provisional Association

3. Riparian vegetation dominated by *Platanus*, *Populus*, or *Salix laevigata* in the tree overstory.
   Southwestern North American Riparian Evergreen and Deciduous Woodland Group
   3a. *Quercus lobata* is the dominant tree or is co-dominant with *Quercus wislizeni* in upland settings.
   If *Q. lobata* stands are found in riparian settings, intermixing with *Salix* spp. or other riparian taxa.
      ***Quercus lobata* Alliance**
      Quercus lobata / grass Association
      Quercus lobata – *Quercus wislizeni* Association
   3b. *Salix laevigata* > 50% relative cover in the tree canopy, or > 30% relative cover with other tree willows and often with *S. lasiolepis* in the sub-canopy (Evens and San 2005, Klein and Evens 2005).

***Salix laevigata* Alliance**

3c. *Salix gooddingii* dominates in the tree canopy. *Salix exigua* is often present in the understory.

***Salix gooddingii* Alliance**

4. Riparian corridors or intermittent watercourses dominated by *Baccharis*, *Celtis*, *Salix lasiolepis*, or *Sambucus*

Southwestern North American Riparian/Wash Scrub Group

4a. *Salix exigua* is characteristically present as a dominant or co-dominant shrub, usually with >5% absolute cover and >50% relative cover in the shrub layer. It forms an open to continuous canopy along riparian corridors. It often forms narrow strips along major creeks and rivers and along ditches and reservoir edges. Other willow species may be present as sub-dominants with low cover, and *Baccharis salicifolia* may occasionally be co-dominant.

***Salix exigua* Alliance**

4b. *Salix lasiolepis* dominates the shrub overstory. If riparian tree species are present, they must be sub-dominant (generally 60% relative cover.

***Salix lasiolepis* Alliance**

***Salix lasiolepis* Association**

5. *Cercocarpus montanus* dominates, often with an open shrub canopy and emergent *Juniperus californica*, *Pinus monophylla*, and/or *Pinus sabiniana*. *Artemisia tridentata*, *Arctostaphylos viscida*, and *Eriogonum fasciculatum* are some of the shrubs that may intermix.

Californian Mesic Chaparral Group

***Cercocarpus montanus* (*betuloides*) Alliance**

Cercocarpus montanus (*betuloides*) / *Juniperus californica* Association

***Cercocarpus montanus* (*betuloides*) – *Eriogonum fasciculatum* Association**

6. Stands are dominated by drought-deciduous shrubs, though at times they can have characteristic (constant but not dominant) resprouting, deep-rooted, sclerophyllous shrubs. Stands include mixed coastal shrublands from central California south into Baja, Mexico. The most predominant shrubs include *Eriogonum fasciculatum*, *Eriogonum wrightii*, and *Hesperoyucca whipplei*. On recently disturbed sites, such as after fire, *Corethrogyne filaginifolia*, *Ericameria linearifolia*, *Gutierrezia californica*, *Isocoma acradenia*, Peritoma (*Isomeris*) arborea, and Lupinus albifrons can be dominant.

Central and South Coastal California Seral Scrub Group

6a. *Ericameria linearifolia*, *Cleome isomeris*, or *Eastwoodia elegans* are dominant or co-dominant in the shrub layer. Typically found on north-facing, steep slopes in the southern Sierra Nevada Foothills in the Tehachapi Mountains. *Ericameria linearifolia*, *Cleome isomeris* and/or *Eastwoodia elegans* > 30% relative cover in the shrub canopy (Buck-Diaz et al. 2011, Buck-Diaz and Evens 2012, VegCAMP and AIS 2013).

***Ericameria linearifolia* – Cleome isomeris Shrubland Alliance**

6a1. *Cleome isomeris* is dominant in the shrub overstory. Found often on steep slopes and in washes

Cleome isomeris Provisional Association

6a2. *Ericameria linearifolia* is primarily dominant or co-dominant with other shrubs in the shrub overstory

Ericameria linearifolia Association

6b. *Eriodictyon californicum*, *E. crassifolium*, *Lupinus* spp., *Lotus scoparius*, or other disturbance related shrubs dominate the shrub canopy with low to moderate cover. *Adenostoma fasciculatum* is typically absent.

***Lotus scoparius – Lupinus albifrons – Eriodictyon spp.* Shrubland Alliance**

7. Stands are characterized by the presence of *Eriogonum fasciculatum*, *E. wrightii* or *Hesperoyucca whipplei*, without significant cover of the previous group of seral scrubs.

Central and South Coastal Californian Coastal Sage Scrub Group

7a. *Eriogonum fasciculatum* is typically ≥2% absolute cover or >50% relative cover in the shrub canopy, but read full description for exceptions. These stands tend to have substantially higher shrub cover and usually do not co-dominate with many species. In the desert hills and mountains >1000m (3000ft) elevation, *Eriogonum fasciculatum* co-occurs with many other semidesert shrubs; if *Ambrosia dumosa*, *Artemisia tridentata*, *Ephedra viridis*, *Ericameria teretifolia*, *Purshia tridentata*, or *Ericameria linearifolia* are equal or higher in cover, key stands to those alliances. *Ambrosia salsola*, *Ericameria nauseosa* or *Hesperoyucca whipplei* may have higher cover than *E. fasciculatum* and still be in the *E. fasciculatum* Alliance.

***Eriogonum fasciculatum* Alliance**

Eriogonum fasciculatum Association

Eriogonum fasiculatum – Salvia melifera

Eriogonum fasciculatum – Hesperoyucca whipplei Association

7b. *Hesperoyucca whipplei* is the sole dominant or may be co-dominant with semi-desert shrubs such as *Atriplex polycarpa* or *Ephedra* spp. *Eriogonum fasciculatum* is noticeably absent from these stands; if *E. fasciculatum* has a minor to significant presence, key to the *Eriogonum fasciculatum* Alliance.

***Hesperoyucca whipplei* Provisional Alliance**

8. *Ephedra californica*, *Lepidospartum squamatum*, or *Prunus fasciculata* characterizes the shrub overstory.

Mojavean Semi-desert Wash Scrub Group

8a. *Lepidospartum squamatum* dominates or characterizes open stands with a variety of native and non-native herbs in the understory, in either desert or cismontane settings. Stands are concentrated along washes - usually larger washes with regular flooding where the substrate texture is coarse sand to small cobbles to gravel. *Lepidospartum squamatum* > 1% cover in alluvial environments (Barbour and Wirka 1997, AECOM 2019).

***Lepidospartum squamatum* Alliance**

9. *Artemisia tridentata* is the dominant shrub or may be co-dominant with *Ericameria nauseosa* or *Eriogonum fasciculatum*. Stands with co-dominance of *Prunus fasciculata* or *Ephedra viridis* key to *Prunus* or *Ephedra*, respectively. Stands with >2% cover and even distribution of *Juniperus californica* or *Yucca brevifolia* (regardless of height) key to *Juniperus* or *Yucca*, respectively.

Inter-Mountain West Mesic Tall Sagebrush Shrubland and Steppe Group

***Artemisia tridentata* Alliance**
Artemisia tridentata – Ericameria nauseosa Association

10. Vegetation dominated by taxa that are relatively small and/or short-lived plants that colonize uplands following natural or unnatural disturbance such as clearing or fire, including *Encelia*, *Ericameria*, or *Gutierrezia*.

    Intermontane Seral Shrubland Group

    10a. *Encelia virginensis* has ≥2% cover and no other shrub species with greater or equal cover. In the borders of the Transverse and Tehachapi ranges, stands often occur on steep, south-facing slopes associated with *Hesperoyucca whipplei* or *Eriogonum fasciculatum*. Stands may have relatively high cover of Achnatherum (*Stipa*) *speciosum* and *Salazaria* (*Scutellaria*) *mexicana*.

    ***Encelia* (*actoni*, *virginensis*) Alliance**
    Encelia virginensis Association

    10b. *Ericameria cooperi* is evenly distributed and dominant across the landscape (stands may be too small to map). Stands show evidence of recent disturbance (typically fire) and are usually adjacent to stands with larger and longer-lived shrubs that are more easily keyed to *Grayia spinosa*, *Ericameria teretifolia* or Larrea tridentata – *Ambrosia dumosa*. This type is provisional based on *E. cooperi* having a significant presence (generally >40% relative cover) in a stand. This alliance is unusual and most stands with co-dominant *E. cooperi* can be better placed in the *Ambrosia dumosa*, *Grayia spinosa*, or *Ambrosia salsola* alliances. Stands with co-dominant *E. nauseosa* or *E. teretifolia* usually key to those alliances, respectively. *E. cooperi* is spring-flowering and a shorter-lived species that is more of a disturbance responder than *Ericameria teretifolia*.

    ***Ericameria cooperi* Provisional Alliance**

    10c. *Ericameria nauseosa* typically dominates the shrub overstory. If *E. nauseosa* is co-dominant with *Eriogonum fasciculatum*, key to the *E. fasciculatum* Alliance. If present, *Juniperus californica* has trace cover. Several subspecies are included in this type (e.g., *E. nauseosa* var. *mohavensis* in the cismontane or desert sides of the study area, or *E. nauseosa* var. *hololeuca* in some semi-riparian stands towards the eastern side).

    ***Ericameria nauseosa* Alliance**

11. Stands with diagnostic species such as *Grayia*, *Ephedra nevadensis*, *E. viridis*, and *Lycium*. These vegetation types merge with the upper edge of the *Larrea tridentata – Ambrosia dumosa* belt and are usually seen on north-facing slopes at lower elevations.

    Intermontane Deep or Well-drained Soil Scrub Group

    11a. *Ephedra viridis* ≥2% cover as the dominant shrub or co-dominant with other shrubs such as *Artemisia tridentata*, *Ericameria teretifolia*, *Grayia spinosa*, *Salazaria* (*Scutellaria*) *mexicana*, *Krascheninnikovia lanata*, *Ericameria cuneatus*, or *Eriogonum fasciculatum*. Associated with steep talus or rock outcrops except at the highest elevations, when it can occur on more moderate slopes.

    ***Ephedra viridis* Alliance**

12. *Adenostoma fasciculatum* is dominant in the shrub canopy with *Adenostoma sparsifolium*, *Arctostaphylos glandulosa*, *Arctostaphylos manzanita*, *Arctostaphylos viscida*, *Ceanothus* spp., Diplacus aurantiacus, Eriodictyon californicum, *Eriogonum fasciculatum*, *Hesperoyucca*

whipplei, *Heteromeles arbutifolia*, *Quercus berberidifolia*, *Quercus wislizeni*, *Salvia apiana*, *Salvia leucophylla*, *Salvia mellifera* and *Toxicodendron diversilobum*. Emergent trees may be present at low cover.
Adenostoma fasciculatum > 50% relative cover in the shrub canopy (cf. Keeler-Wolf et al. 1998b); codominance of *A. fasciculatum* with the following species are classified in alliances of these other character species: *Adenostoma sparsifolium*, *Arctostaphylos glauca*, A. glandulosa, *Ceanothus crassifolius*, *C. cuneatus*, and *C. greggii*.

Californian xeric chaparral Group

***Adenostoma fasciculatum* Alliance**

13. *Quercus john-tuckeri* is dominant or co-dominant with *Juniperus californica* (*Q. john-tuckeri* is recognized as a shrub in the USNVC, while *J. californica* is recognized as a tree, but both species often share similar stature and height). In this mapping effort *Quercus john-tuckerii* was mapped as a tree. Pinus monophylla and/or *P. sabiniana* are often present with lower cover than *Quercus*. *Cercocarpus*, *Ephedra*, *Ericameria linearifolia*, *Eriogonum fasciculatum* and other shrubs may be found in the understory.

    Western Mojave and Western Sonoran Desert Borderland Chaparral Group

    ***Quercus john-tuckeri* Alliance**

    ***Quercus john-tuckeri / Pinus monophylla – Pinus sabiniana* Provisional Association**

    ***Quercus john-tuckeri / Juniperus californica /* Ericameria linearifolia Association**

14. *Ceanothus greggii* dominates or co-dominates with *Adenostoma fasciculatum* in the shrub overstory.

    Mogollan Rim Chaparral Group

    14a. Ceanothus greggii var. *perplexans*, *Ceanothus greggii* var. *vestitus* and/or *Fremontodendron californicum* is dominant or co-dominant in the shrub canopy with *Adenostoma fasciculatum*, Adenostoma sparsifolium, *Arctostaphylos glauca*, *Artemisia tridentata*, *Cercocarpus montanus*, *Dendromecon rigida*, *Ericameria nauseosa*, *Eriogonum fasciculatum*, *Fallugia paradoxa*, *Garrya veatchii*, *Hesperoyucca whipplei*, Lotus scoparius, *Prunus fasciculata*, *Prunus fremontii*, *Purshia glandulosa*, *Purshia stansburiana*, *Quercus berberidifolia*, *Quercus cornelius-mulleri*, *Quercus john tuckeri*, *Quercus palmeri*, *Quercus wislizeni*, *Rhus ovata*, *Salvia apiana* and *Salvia mellifer*. Emergent trees may be present at low cover, including *Juniperus californica* or *Pinus monophylla*.

    Ceanothus greggii > 30% relative cover in the shrub canopy with *Fremontodendron californicum* or other shrubs (Reyes et al. 2020a).

    Both Adenostoma fasciculatum and *Ceanothus greggii* have between 30% and 60% relative cover in the shrub canopy (cf. Evens and San 2005, Gordon and White 1994).

    Fremontodendron californicum > 50% relative cover in the shrub canopy (Reyes et al. 2020a).

    ***Ceanothus greggii - Fremontodendron californicum* Shrubland Alliance**

15. *Xanthium* and/or Persicaria characterize stands, though a number of naturalized species, such as *Polypogon monspeliensis*, *Apium graveolens*, and *Veronica* spp. may be present with significant cover. Naturalized Warm-Temperate Riparian and Wetland Group
    Arid West Freshwater Emergent Marsh Group
    ***Persicaria lapathifolia – Xanthium strumarium* Provisional Alliance**

16. Vegetation is dominated by or characterized by Carex densa, *Juncus arcticus*, *Leymus triticoides*, or *Mimulus guttatus*.
    Californian Warm Temperate Marsh/Seep Group

17. Vegetation is dominated by tall emergent perennial herbs such as species of *Schoenoplectus* and *Typha* found in permanently wet soil or standing water.
    Arid West Freshwater Emergent Marsh Group
    17a. *Schoenoplectus acutus*, the tall, emergent tule, dominates where ponds and sluggish, permanently flowing water exist.
        ***Schoenoplectus acutus* Alliance**
        ***Schoenoplectus acutus* Association**
    17b. A species of *Typha* dominates in the tall herb layer.
        ***Typha* (*angustifolia*, *domingensis*, *latifolia*) Alliance**

18. Vegetation characterized by native and non-native grasses and herbs adapted to Mediterranean climates. Shrubs, if present, are not >10% absolute cover and/or not evenly distributed across a stand.
    California Annual and Perennial Grassland Macrogroup

    18a. Stands are dominated or characterized by mostly annual grasses and forbs. Native herbs are characteristic and evenly distributed across the herbaceous layer, though non-native forbs and grasses may be dominant. Cover and composition vary year to year, but indicators are usually present in sufficient amounts to differentiate from non-native stands. Diagnostic species include *Amsinckia* spp., *Artemisia dracunculus*, *Eschscholzia* spp., *Holocarpha* spp., *Lasthenia* spp., *Phacelia* spp., *Plantago erecta* and *Vulpia microstachys*.
    California Annual Forb/Grass Vegetation Group

        18a1. *Eschscholzia californica* is seasonally dominant on upland slopes or flats with well-drained sandy to loamy soils. *Amsinckia*, *Avena*, *Bromus*, *Castilleja exserta*, *Erodium cicutarium*, *Lupinus bicolor*, *Lupinus microcarpus*, *Uropappus lindleyi* and a variety of other native and non-native forbs and grasses may be present.
        ***Eschscholzia* (*californica*) Alliance**

    18b. Stands are strongly dominated by non-natives and lack evenly distributed, diagnostic native plants (usually <5% relative cover). Annual *Avena*, *Bromus*, *Schismus*, *Brassica* and other non-native herbaceous taxa are strongly dominant. Because very few surveys were collected in non-native stands for this project, most polygons will be mapped broadly at the Group Level.
    Mediterranean California Naturalized Annual and Perennial Grassland Group

References

Link to GIS data files
Finescale Vegetation Mapping at the SVRAs (arcgis.com)

California Native Plant Society. A Manual of California Vegetation Online. Available at https://vegetation.cnps.org/. Accessed February 2021 – August 2022.

CDFW a. Combined Vegetation Rapid Assessment and Relevé Field Form. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18598&inline

CDFW b. Survey of California Vegetation Classification and Mapping Standards Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=102342&inline

CDFW-CNPS. CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18599&inline

Klein, A., J. Crawford, J. Evens, T. Keeler-Wolf, and D. Hickson. 2007. Classification of the vegetation alliances and associations of the northern Sierra Nevada Foothills, California. Report prepared for California Department of Fish and Game. California Native Plant Society, Sacramento, CA. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18232&inline

Klein, A., T. Keeler-Wolf. 2014. Hierachical Field and Mapping Key to the Vegetation of the Proposed Tehachapi Pass High-Speed Rail Corridor. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=101349&inline

Menke, J., E. Reyes, A. Glass, D. Johnson, and J. Reyes. 2013. 2013 California Vegetation Map in Support of the Desert Renewable Energy Conservation Plan. Final Report. Prepared for the California Department of Fish and Wildlife Renewable Energy Program and the California Energy Commission. Aerial Information Systems, Inc., Redlands, CA. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=62826&inline

Reyes, E., A. Glass, J. Evens, J. Buck-Diaz, A. LaFever-Jackson, J. Ratchford, R. Boul, R. Yacoub, J. Menke, J. Fulton, and D. Johnson. 2022. Fine-Scale Vegetation Map and Accuracy Assessment of the Southern Sierra Nevada Foothills, California. Contract P1884008. Final Report. Prepared for the California Department of Fish and Wildlife. Aerial Information Systems, Inc., Redlands, CA. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=211115&inline

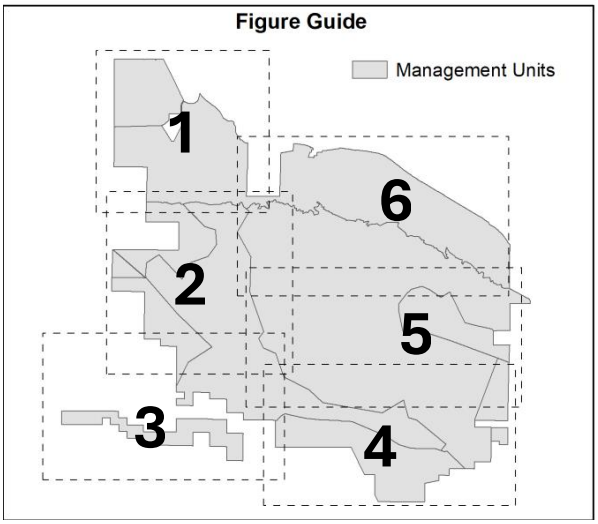
Appendices

Appendix A: Map Figures

Hungry Valley SVRA
Vegetation Communities

Vegetation Community (common name)

1. Singleleaf pinyon woodland
2. California juniper woodland
3. Valley oak woodland
4. Fremont cottonwood woodland
5. Fremont cottonwood - red willow woodland
6. Red willow woodland
7. Sandbar willow thickets
8. Arroyo willow thickets
9. Chamise chaparral
10. Bigberry manzanita chaparral
11. Tucker oak chaparral
12. Tucker oak/California juniper/Interior goldenbush chaparral
13. Tucker oak/Singleleaf pinyon chaparral
14. Deerweed - silver lupine - yerba santa scrub
15. Interior goldenbush - bladderpod scrub
16. Central and South Coastal Californian Coastal Sage Scrub Group
17. California buckwheat scrub
18. California buckwheat - chaparral yucca scrub
19. Chaparral yucca scrub (Provisional)
20. Black sage scrub
21. Scale broom scrub
22. Brittle brush scrub
23. Cooper's goldenbush scrub (Provisional)
24. Mormon tea scrub
25. Rubber rabbitbrush scrub
26. Big sagebrush scrub
27. Big sagebrush - rubber rabbitbrush scrub
28. Ceanothus - flannelbush chaparral
29. Intermontane Deep or Well-drained Soil Scrub Group
30. Mediterranean California Naturalized Annual and Perennial Grassland Group
31. California Annual Forb/Grass Vegetation
32. California poppy fields
33. Arid West Freshwater Emergent Marsh
34. Californian Warm Temperate Marsh/Seep Group
35. Naturalized Warm-Temperate Riparian and Wetland Group
36. Cliff, Scree, Rock outcrop
37. Urban
38. Water



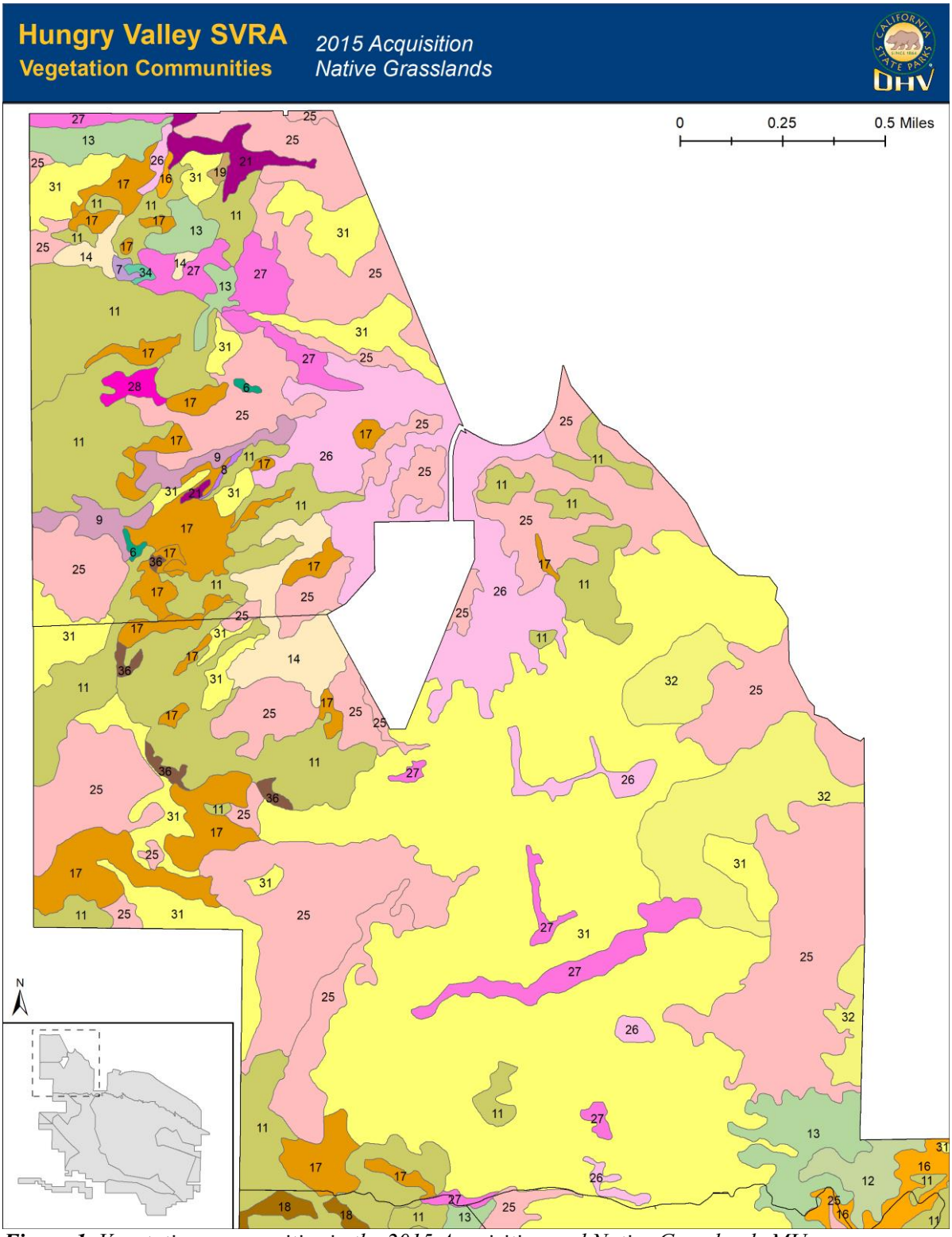


Figure 1. *Vegetation communities in the 2015 Acquisition and Native Grasslands MUs*

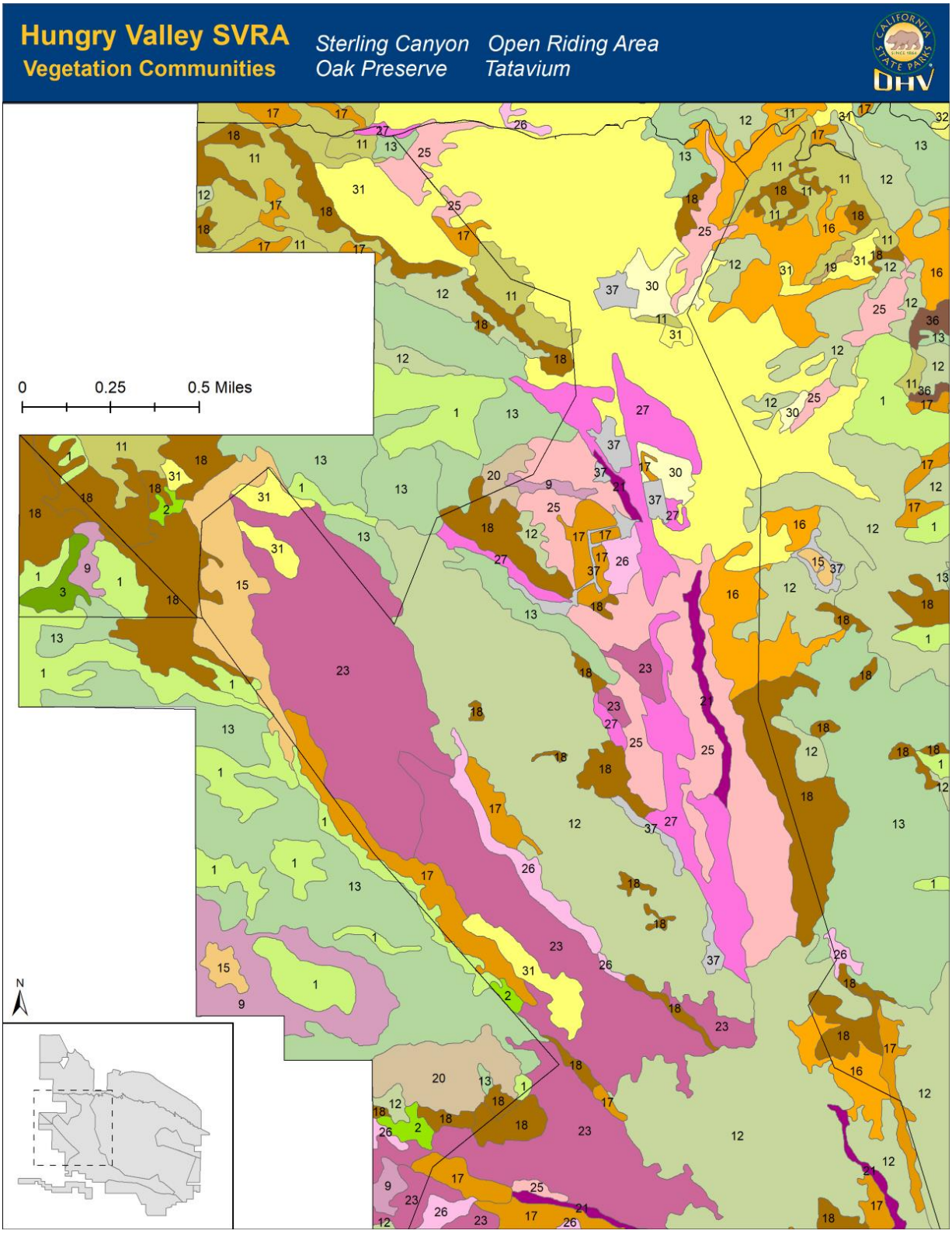


Figure 2. *Vegetation communities in the Sterling Canyon, Oak Preserve, Open Riding Area, and Tatavium MUs*

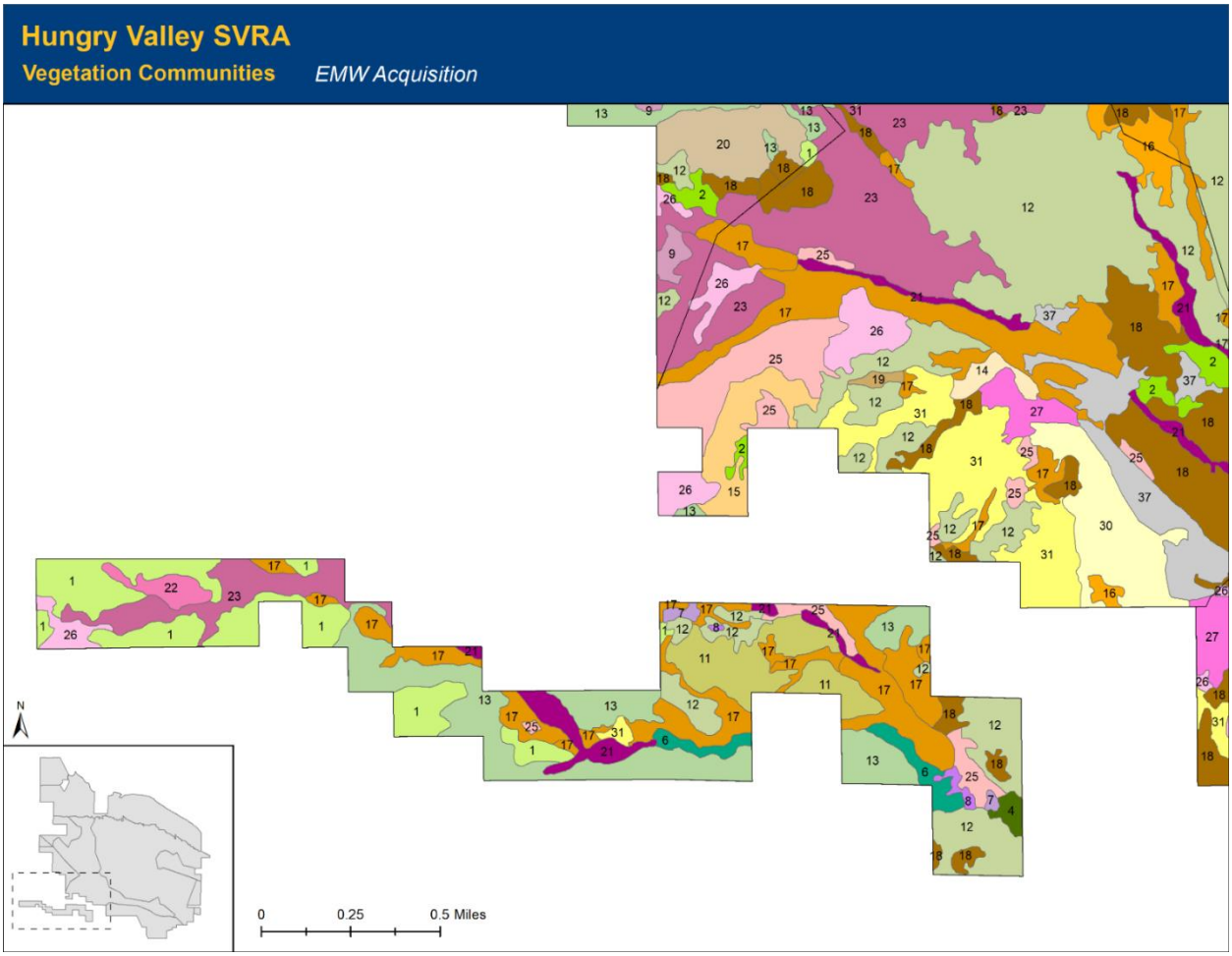


Figure 3. *Vegetation communities in the EMW Acquisition*

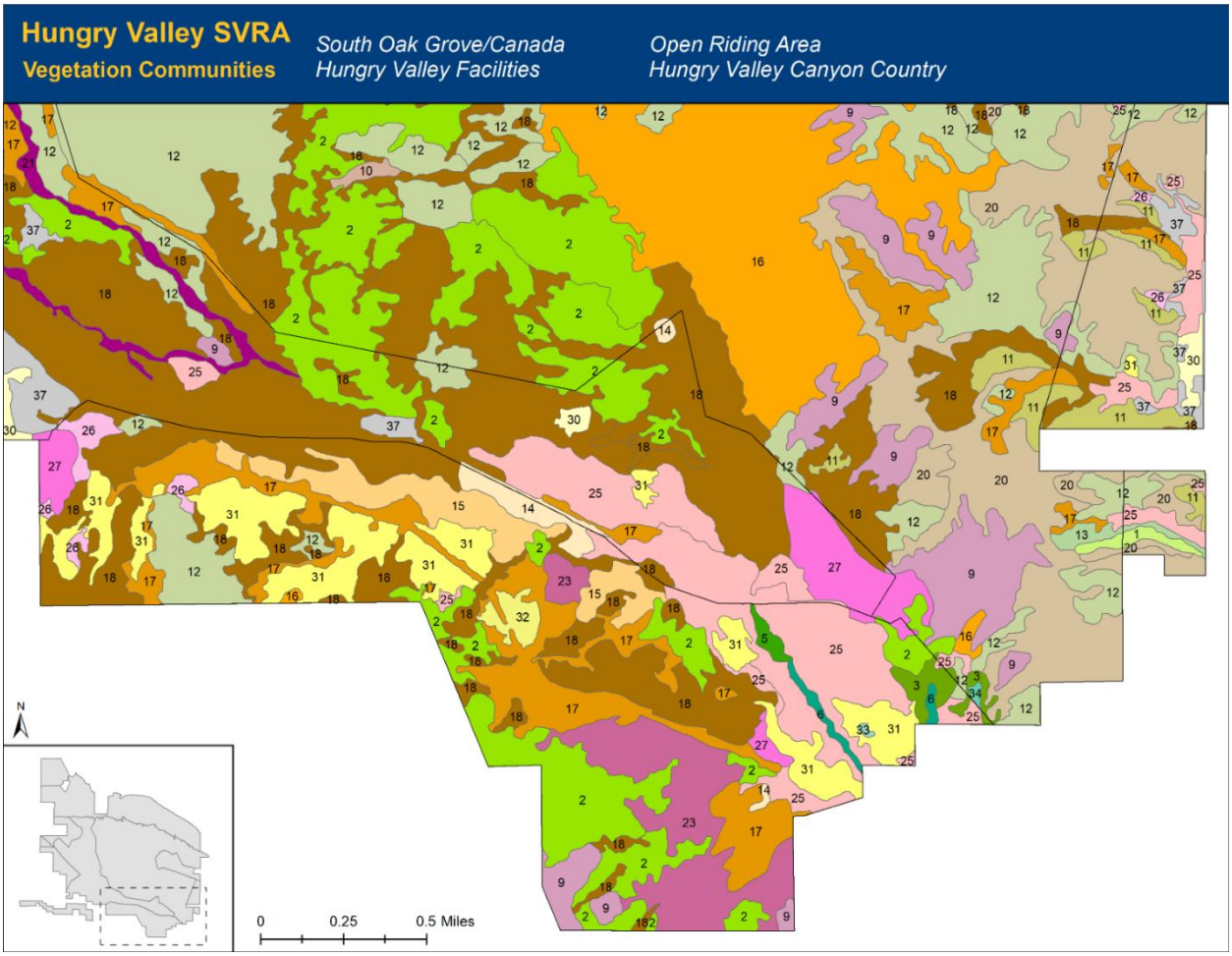


Figure 4. *Vegetation communities in the South Oak Grove/Canada, Hungry Valley Facilities, Open Riding Area, and Hungry Valley Canyon Country MUs*

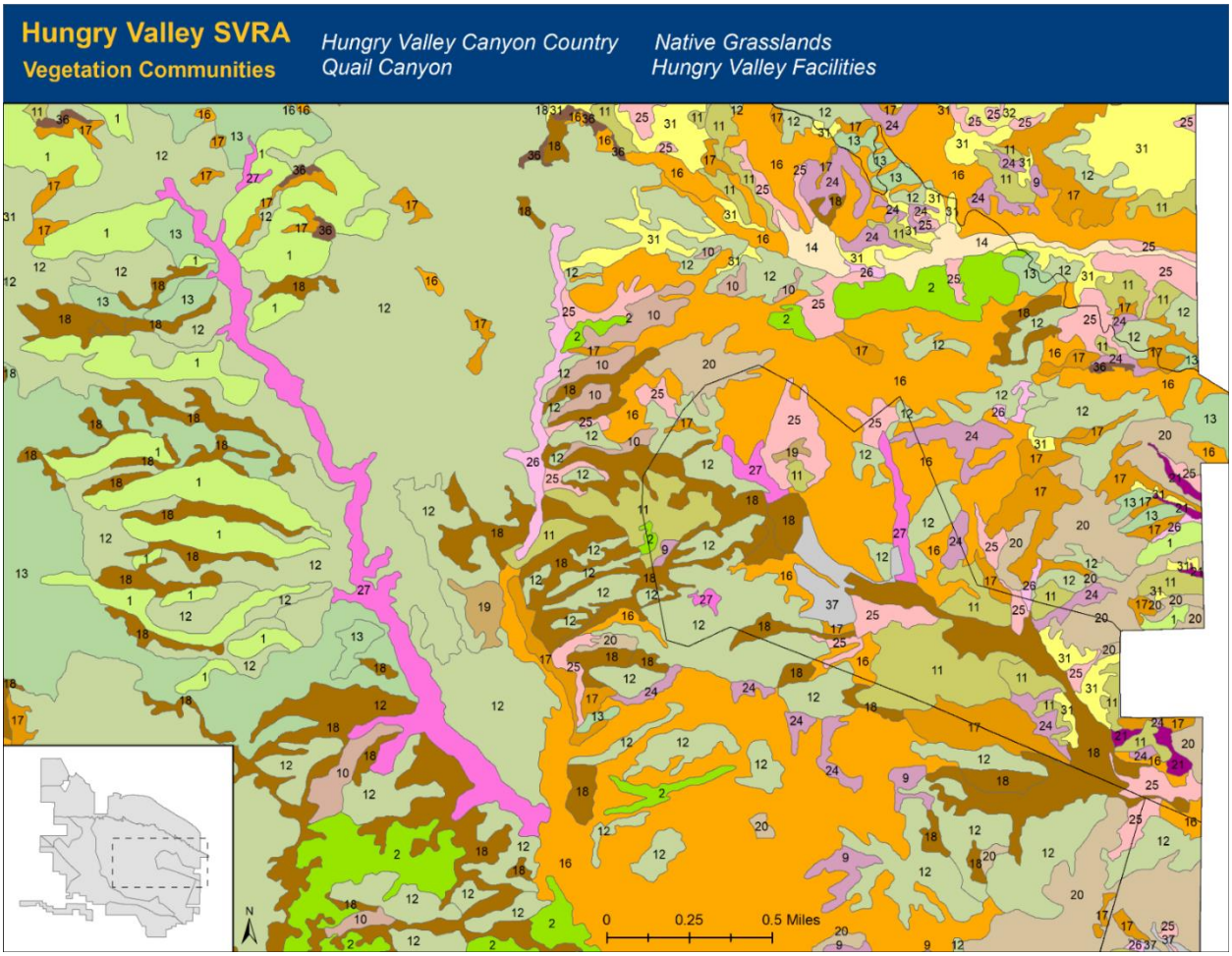


Figure 5. *Vegetation communities in the Hungry Valley Canyon Country, Quail Canyon, Native Grasslands, and Hungry Valley Facilities MUs*

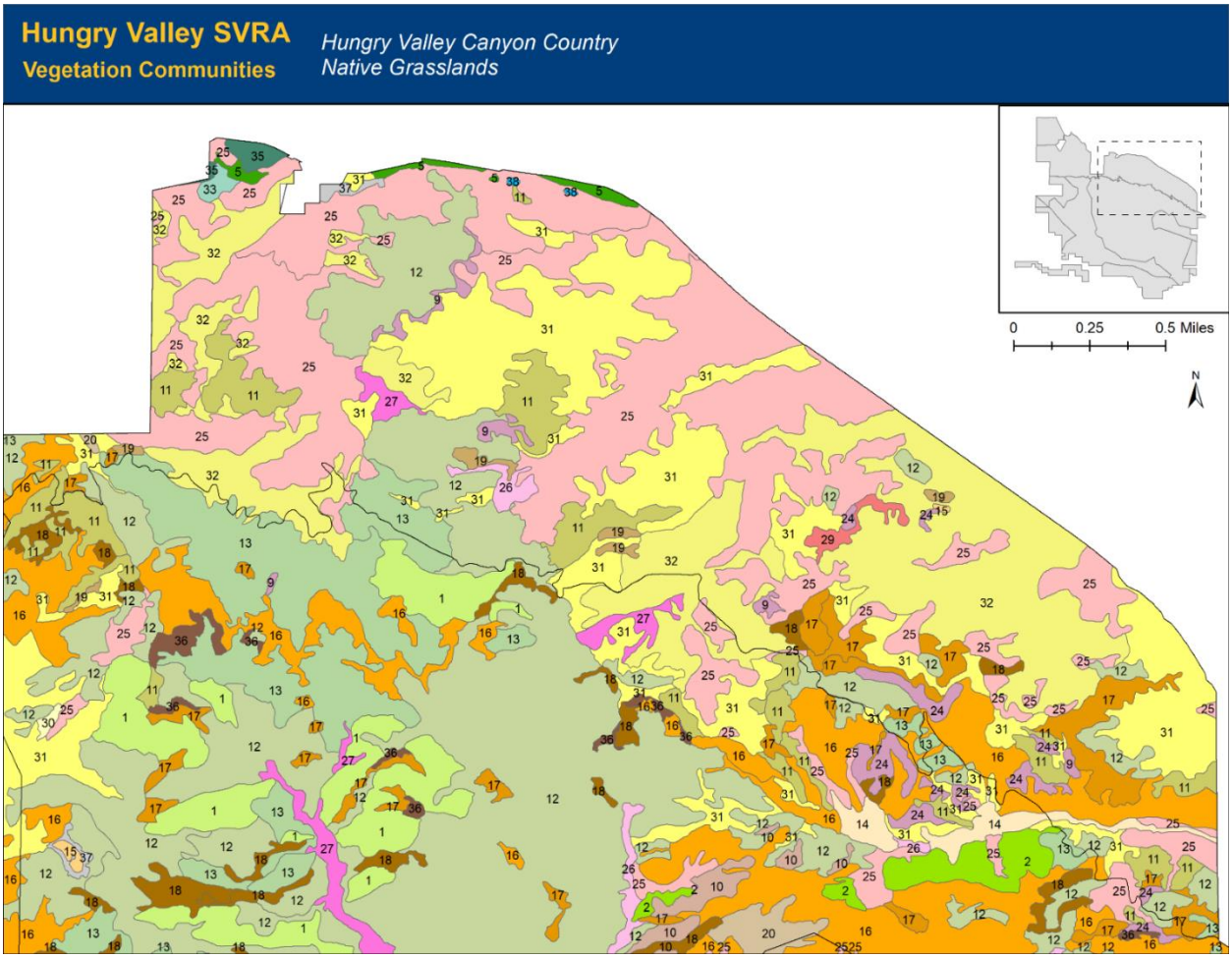


Figure 6. *Vegetation communities in the Hungry Valley Canyon Country, and Native Grasslands MUs*

Appendix B: Field datasheets

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

Recorder: MVP | Other Surveyors: LG ; Jessi, AJ | Date: 4-5-21 | Return? ☐

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

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

UID: HV001

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

Location Name:

Base / Projected (circle one) Record either UTMs or Decimal Degrees | GPS error: ft./ m./ PDOP 26

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.759929 LONG -118.906722

Stand Size: <1 1–5 >5 | Camera: | Photos: MVP phone | View Radius _____

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

Field Alliance name: Artemesia tridentata

Comments: Open rabbitbush / buckwheat scrub meadow, adjacent to valley oak stand, Pinyon pine stand. Bunch of old rusted tin cans

% Cover: Conifer 0 Hardwood 0 Total Tree 0 Regen Tree _____ Shrub _____ Herb _____ Total Veg _____ Exotics (L,M,H) _____

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Ericameria nauseosa	2						
S	Eriogonum fasciculatum var. polifolium	5	H	Erodium cicutarium	5	H	Penstemon centranthifolius	<1
S	Artemesia palmeri	<1	H	Bromus spp.	5	S	Ephedra viridis	<1
S	Artemesia tridentata	10	S	Ribes sp.	<1	S	Hesperoyucca whipplei	<1

↑yellow fl. = Ribes quercetorum

Recorder: MVP | Other Surveyors: LG, Jessi, AJ | Date: 4-5-21 | Return? ☐

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

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

UID: HV002

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

Location Name:

Base / Projected (circle one) Record either UTMs or Decimal Degrees | GPS error: ft./ m./ PDOP _____

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.760281 LONG -118.906749

Stand Size: <1 1–5 >5 | Camera: MVP phone Photos: (N) | View Radius _____

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

Field Alliance name: Quercus lobata

Comments: Valley oak stand. Not leafed out yet. Narrow. Roses & willows in understory, plus a few grasses

% 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	Valley oak	10	S	Lonicera subsp. var. dem.	<1	T	Pinus monophylla	<1
S	Rosa californica	5	S	Salix spp.	3	S	E. nauseaus	<1
H	unkn. bunch grass	1	S	Hesperoyucca whipplei	<1	H	M. nigens	<1

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

Recorder: MVP **Other Surveyors:** LG, Jessi, AJ **Date:** 4-5-21 **Return?** ☐

Waypoint ID: HV003

UID:

Location Name: * just outside park boundary oops!

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 UTMs or Decimal Degrees GPS error: **ft./ m./ PDOP** 19'

UTMs: UTME _____ **UTMN** _____

Decimal degrees: **LAT** 34.759662 **LONG** -118.909032

Stand Size: <1 (1–5) (>5) **Camera:** MVP **Photos:** 2 MVP **View Radius** _____

Exposure, Actual °: _____ (NE) NW SE SW Flat Variable | **Steepness, Actual °:** _____ 0° (1-3°) >5-25° >25

Field Alliance name: Pinus monophylla

Comments: Flatish slopi y gently upward. Mix of pines, oaks, juniper, with sage + rabbitbrush understory. Saw too late is slightly outside park

% 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	P. monophylla	10	S	Juniperus sp. californica	2	S	H. unipleuri	<1
T	Quercus chrysolepis sp	5	S	E. nauseosa	1	S	E. fasc. var pol.	<1
S	A. tridentata	3	S	Q. John-Tucker	2	S	Ribes quercitorum sp.	<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: Relevé or (RA)

Database #: HV 004 (renamed)	Date: 4-7-21	Name of recorder: Melissa, Leah, AJ, Jessi
		Other surveyors:
	UID:	Location Name: Hungry Valley

GPS name: Melissa 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 34.807635 LONG 118.893791

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: Melissa phone Cardinal photos at ID point: (N)

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 120 m

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

Topography: Macro: top (upper) mid lower bottom | Micro: (convex) flat concave undulating

Geology code: _____ Soil Texture code: COLS | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 0 BA Stems: 2 Litter: 10 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: <1 Gravel: 80 Fines: 8 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / No 3 % Hoof punch 0

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: - Rabbitbrush, Ericameria shrubs, non-OHV, 2015 acquisition. Gently sloping, flat area near by may be part of stand. Veg transect within stand, this is 1st year monitoring. Near Frazier High School. Pork road adjacent to stand.

Disturbance code / Intensity (L,M,H): 05/L 15/L ___/___ ___/___ ___/___ "Other" _____/___

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

- Tetracuspi + DRCP.

Field-assessed vegetation Alliance name: Ericameria nauseosa

Field-assessed Association name (optional): NA -

Adjacent Alliances/direction: Trees adjacent - Pinyon / Scrub oak / S / /

Confidence in Alliance identification: L (M) H Explain: not perfectly aligned in way

Phenology (E,P,L): Herb E Shrub E Tree / Other identification or mapping information:

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

Database #: HV004

IV. VEGETATION DESCRIPTION

% NonVasc cover:____ **Total % Vasc Veg cover:**____

% Cover - **Conifer tree / Hardwood tree:** ____/____ **Regenerating Tree:** ____ **Shrub:** ____ **Herbaceous:** ____

Height Class - Conifer tree / Hardwood tree: ____/____ **Regenerating Tree:** ____ **Shrub:** ____ **Herbaceous:** ____

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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
S	Ericameria nauseosa	13		
S	E. cooperii	1		
S	E. linearifolia	1		
S	Senecio flaccidus	2		
S	Artemesia tridentata	+		
H	Agoseris retrorsa	r		
↓	Hoopappus lindleyi	r		
	Erodium cicutarium	15		
	Eriogonum sp	+		
	Eriogonum sp.	+		
	unkn. grass sp	1		
	" sp	1		
	Cryptantha sp.	r		C. circumscisa
	" sp.	r		
	Astragalus sp.	r		
	Phacelia tanacetifolia	r		
	Phacelia sp.	r		
	Corethrogyne filaginifolia	r		
	Raphanesoria ... ?	r		

Unusual species: _____

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: Relevé or (RA)

Database #: HV005 | Date: 4-5-21 | Name of recorder: M. Patlan

Other surveyors: LG, AJ, Jessie

UID: | Location Name:

GPS name: MP 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 34.776052 LONG 118.896031

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID ____ Projected UTMs: UTME ___ UTMN ___

Camera Name: MP Phone Cardinal photos at ID point: N

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / ____ | Plot Dimensions ____ x ____ m | RA Radius ____ m

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

Topography: Macro: top (upper) mid lower bottom | Micro: convex flat (concave) undulating

Geology code: ____ Soil Texture code: ____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 0 BA Stems: 2 Litter: 5 Bedrock: <1 Boulder: 0 Stone: <1 Cobble: 25 Gravel: 15 Fines: 50 =100%

% Current year bioturbation <1 Past bioturbation present? Yes / (No) | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: Slope surrounded by steeper slopes at different angles. Imagery shows this as greener area - almost looks like a drainage. Fire history - burned dead oak trees - both species. Clump of live scrub oak in center. John Tucker oaks, also present.

Excluding dense clump of oak resprouts for cover estimates. See later if it should be mapped separately. Averaged cover across all hillslope non-native grasses throughout

Some sandstone? looking bedrock exposed

Disturbance code / Intensity (L,M,H): Fire/ H ___/___ Invasives/ M ___/___ ___/___ "Other" ___/___

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) dead oaks present but not counted

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: Tucker-oak chaparral - DRECP

Field-assessed Association name (optional): ?

Adjacent Alliances/direction: ___/___, ___/___

Confidence in Alliance identification: L (M) H Explain: might not fit perfectly

Phenology (E,P,L): Herb E Shrub E Tree ____ Other identification or mapping information:

"HV105" because 105 is existing plot name for park

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

SPECIES SHEET

Database #: _____

IV. VEGETATION DESCRIPTION

% Cover - Conifer tree / Hardwood tree: ____/____ Regenerating Tree: ____ Shrub: 20 Herbaceous: 21 % NonVasc cover: ____ Total % Vasc Veg cover: ____

Height Class - Conifer tree / Hardwood tree: ____/____ Regenerating Tree: ____ Shrub: 3 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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
S	Hesperoyucca whipplei	<1		
H	Acmispon glaber	<1		
S	Arctostaphylus glauca	<1		
S	Eriogonum fasciculatum	4		
	var. polifolium			
S	Garrya flavescens	5		
S	Tucker's oak Quercus john-tuckeri	8		
S	Eriodictyon crassifolium	2		
S	Ribes sp. Quercitorum (yellow flwrs)	r		
H	Penstemon centranthifolius	<1		
H	Astragalus sp.	<1		
H	Chia - Salvia columbariae	<1		
H	Erodium	<1		
H	Bromus sp. (madritensis?)	20		
	~~Unknown grass~~			
H	Elymus condensatus	r		
S	Ephedra viridis	<1		
S	Fremontodendron californicum	r		
S	Malacothamnus fremontii	<1		
H	Penstemon sp.	<1		grenellii ?
	Shrub: S-Tuck 8	40%		
	G.flav 5	25%		
	E.crass 2	10%		
	E. fas pol 4	20%		
	+ - 1% other	5%		
	20			

Unusual species: _____

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

Recorder: MVP | Other Surveyors: | Date: 4-6-21 | Return? ☐

Waypoint ID: | UID: HV006 | Location Name:

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 UTMs or Decimal Degrees | GPS error: (ft.) m./ PDOP 20
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.756673 LONG -118.836896

Stand Size: <1 (1–5) >5 | Camera: MVP phone Photos: (N) | View Radius 50 m

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

Field Alliance name: Ericameria nauseosa

Comments: Sandy wash, lots of bare ground. Lighter color on map. Oak stand adjacent on hills to SE, ↑ Quercus tuckeri

% Cover: Conifer ___ Hardwood ___ Total Tree ___ Regen Tree ___ Shrub 18 Herb ___ Total Veg ___ Exotics (L,M,H) ___

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	A. tridentata var. tridentata	15	S	Erio. fasc. var. pol. folium	2	S	Ephedra viridis	<1
S	E. nauseosa	7	S	H. whipplei	<1	H	Bromus tectorum	<1
S	Lepidospartum squamatum	5	S	Bladderpod	<1			

E.naus = 55% A.trident = 25% Lep.s = 25%

Recorder: MVP | Other Surveyors: | Date: 4-6-21 | Return? ☐

Waypoint ID: | UID: HV007 | Location Name:

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 UTMs or Decimal Degrees | GPS error: (ft.) m./ PDOP 26
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.756988 LONG -118.836483

Stand Size: <1 (1–5) >5 | Camera: MVP phone Photos: (N) | View Radius _____

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

Field Alliance name: Ericameria nauseosa

Comments: Slightly darker zone on map. Veg thicker, also some dead shrub - fire? Look like dead yerba santa

% Cover: Conifer ___ Hardwood ___ Total Tree ___ Regen Tree ___ Shrub 25 Herb 1 Total Veg ___ Exotics (L,M,H) ___

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	A. tridentata	6	S	A. palmeri	2	H	Erodium cic.	1
S	E. nauseosa	10	S	Ephedra viridis	2	H	Grass	<1
S	Eriodictyon crassifolium	3	S	L. squamatum	3	S	Er. fas. var pol	<1

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

Recorder: MVP | Other Surveyors: | Date: 4-6-21 | Return? ☐

Waypoint ID: HV008

UID:

Location Name:

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 UTMs or Decimal Degrees GPS error: (ft.) m./ PDOP 26

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.789619 LONG -118.848036

Stand Size: <1 1–5 (>5) | Camera: MVP phone Photos: (N) | View Radius _____

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

Field Alliance name: Quercus John-Tuckeri. aspect + steepness

Comments: Variable sloping Q. John-Tuckeri woodland. Some open areas w/ shrubs, herbs former + current OHV trails through stand. Soil is v. dry, code MCSL. Lots of bare sediment Lower cover of non-natives, just some of the brome. Some browsing of grasses, some hoof punches

% Cover: Conifer ___ Hardwood ___ Total Tree ___ Regen Tree ___ Shrub 11 Herb 2 Total Veg ___ Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Quercus John-Tuckeri	25	S	Arctostaphylus glauca	2	S	Rhamnus illicifolia	<1
S	Juniper	1	S	Ericameria linearifolia	<1	S	Ribes quercitorum	<1
S	E. nauseosa	<1	H	Poa secunda	<1	H	Bromus sp.	<1
S	Eriogonum fasc polifolium	10				H	prickly phlox	

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

Recorder: MVP | Other Surveyors: LG, AJ, Jessi | Date: 4-7-21 | Return? ☐

Waypoint ID: HV009

UID:

Location Name: near 109

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 UTMs or Decimal Degrees GPS error: (ft.) m./ PDOP 19

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.745035 LONG -118.898414

Stand Size: <1 1–5 >5 | Camera: Photos: (N) | View Radius _____

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

Field Alliance name: Ericameria linearifolia - Cleome isomeris

Comments: Near historic "sheep shed" - history of grazing, Look into history. Open clearing in chaparral, with E. linearifolia, scattered P. monophylla, buckwheat, some old tin cans. Most P. monophylla are young, 0-2 m

% Cover: Conifer ___ Hardwood ___ Total Tree ___ Regen Tree ___ Shrub 10 Herb 2 Total Veg ___ Exotics (L,M,H)

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Ericameria linearifolia	15		Juniper	<1			
	E. nauseosa	2		H. whipplei	<1		Stipa speciosa	<1
	P. monophylla	1		Castilleja sp.	<1		Bromus sp.	<1
	E. fascic var pol.	3		Erodium cic.	<1		Elymus sp. (squirreltail)	<1

Towards SW: Pinyon / Juniper on slopes

Recorder: | Other Surveyors: | Date: 4-7-21 Return? ☐

Waypoint ID: HV010 | UID: | Location Name:

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP _____
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.745440 LONG -118.897297

Stand Size: <1 1–5 >5 | Camera: MVP phone Photos: (N) | View Radius _____

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

Field Alliance name: Adenostoma fasciculatum

Comments: Chamise chaparral somewhat decadent. Not much herb cover unless counting opuntia. no.

% Cover: Conifer ___ Hardwood ___ Total Tree 1 Regen Tree ___ Shrub 40 Herb 6 Total Veg ___ Exotics (L,M,H)

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Q. John-tuckeri	3						
S	A. fasciculatum	35	S	Phoradendron villosum	<1	T	Opuntia basilaris	<1
S	A. glauca	2	S	Lonicera subspicata denudata	<1			
T	P. monophylla	1	S	Juniper	<1			

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

Recorder: M.Patten Other Surveyors: LG | Date: 4-7-21 Return? ☐

Waypoint ID: HV011 | UID: | Location Name: near 111 plot

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP 19
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.747515 LONG -118.820354

Stand Size: <1 1–5 (5) | Camera: MVP phone Photos: (N) | View Radius _____

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

Field Alliance name: Eriogonum fasciculatum

Comments: Shrubby stand adj to track + road, slopes up hillside towards SE until Juniper / John tuckers oaks. Lots of exposed bare ground, not much herb. Wash / drainage - gated road, septic AJ, + buried in area.

% Cover: Conifer ___ Hardwood ___ Total Tree ___ Regen Tree ___ Shrub 30 Herb 1 Total Veg 31 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Ephedra viridis	<1		Bladderpod	<1		H. whippleii	<1
	Encelia virginensis	5		Eriodictyon crassifolium	3		Bromus sp.	1
	Ericameria nauseosa	7		Erodium cicutarium	<1		Amsinckia tessellata	trace
	Eriogonum fasciculatum (not mojave)	20		Unk. Plag/cryptantha	trace		Opuntia basilaris	trace
				Goldfields	<1		Unk. bunchgrass	trace

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

Recorder: AJ **Other Surveyors:** MVP, LG, JV **Date:** 4-7-21 **Return?** ☐

Waypoint ID: HV012 **UID:** **Location Name:** HUNGRY VALLEY SVRA

GPS Name MP (PHONE) **Projected?** No / (Yes) / Base / Digitized
If Yes, enter: **Bearing (°):** 240-13 **Distance (m):** 75-40 **Inclination (°):** _____
If Yes or Digitized, enter: **Base Waypoint ID:** _____
Base / Projected (circle one) Record either UTMs or Decimal Degrees GPS error: (ft.) / m. / PDOP 20
UTMs: UTME _____ **UTMN** _____
Decimal degrees: **LAT** 34.725165 **LONG** -118.814039

Stand Size: <1 1–5 >5 **Camera:** **Photos:** **View Radius** _____

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

Field Alliance name: Eriogonum fasciculatum

Comments: BEDROCK EXPOSED / ROCKY / STEEP HILLS W/ VARIABLE SLOPE & ASPECT / PATCHY J. TUCKERII / ADJACENT TO FLAT "ERFA"
Recon is hilly hill area - not flatland. Projected. Imagery - looks white grond

% Cover: Conifer 0 Hardwood 5 Total Tree 5 Regen Tree Ø Shrub 14 Herb r Total Veg 19 Exotics (L,M,H)

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
T	Q. J. TUCKERII	5	S	E. CODPERII	r	H	UNK BUNCH GRASS	r
S	E. FASICULATUM	12	S	A. GLAUCA	<1	H	OPUNTIA BASILARIS	r
S	H. WHIPLEII	1	S	S. MALIFERA	1			
S	E. VERIDIS	r	S	E. VIRGINENSIS	r			

Recorder: MVP **Other Surveyors:** LG, AJ, JV **Date:** 4-7-21 **Return?** ☐

Waypoint ID: HV013 **UID:** **Location Name:** near 108

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 UTMs or Decimal Degrees GPS error: **ft./ m./ PDOP** _____
UTMs: UTME _____ **UTMN** _____
Decimal degrees: **LAT** 34.716437 **LONG** -118.895511

Stand Size: <1 (1–5) >5 **Camera:** MVP phone **Photos:** (N) **View Radius** 50m

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

Field Alliance name: Lepidosportum squamatum

Comments: Braided wash, dominated by L. squamatum. Rockier, cobble, stones with larger rocks than upland. Historic garbage - cans, shredded rubber - tires?

% Cover: Conifer Hardwood Total Tree Regen Tree Shrub Herb Total Veg Exotics (L,M,H)

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Lepidosportum squamatum	20	S	Juniper	r	S	Coffeberry f. californica	r
S	E. fasc. var pol.	8	S	Cercocarpus betuloides	r	S	R. illicifolia	r
S	H. whipleii	<1	H	Erodium cic.	<1	H	Brickellia californica	<1
H	Datura wrightii	r	T	P. monophylla	r	S	Sambucus nigra ssp. caerulea	r
S	E. cooperi	r	H	Gallium sp.	r			

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

Recorder: Jessi V | Other Surveyors: MP, LG, AJ | Date: 04/08/21 | Return? ☐

Waypoint ID: HV014

UID:

Location Name: near plot 197

GPS Name MP Phone | Projected? No / (Yes) / Base / Digitized

If Yes, enter: Bearing (°): SW | Distance (m): 10 | Inclination (°):

If Yes or Digitized, enter: Base Waypoint ID:

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

UTMs: UTME UTMN

Decimal degrees: LAT 34.769685 LONG -118.852458

Stand Size: <1 (1–5) >5 | Camera: MP Phone Photos: | View Radius 30m

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

Field Alliance name: Quercus john tuckeri

Comments: several native & non-native grass species, approx. 1 acre, a few dead P. monophylla, more Pinon than we saw at lower elevations, steep hill by wash, juniper & scrub oak same height so putting in tree layer

% Cover: Conifer 5 | Hardwood 18 | Total Tree 23 | Regen Tree <1 | Shrub 1 | Herb 30 | Total Veg 37 | Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	Q. johntuckeri	18	S	A. glauca	1	S	R. trilobata	r
+	P. monophyla	3	S	L. subspicata dewinter	r			
S	J. californicus	2	h	Unk grass	30			

Recorder: MP | Other Surveyors: LG, AJ, JV | Date: 4-8-21 | Return? ☐

Waypoint ID: HV015

UID:

Location Name: off of meadows trail

GPS Name MP Phone | Projected? No / Yes / (Base) / Digitized

If Yes, enter: Bearing (°): from N to E | Distance (m): 270 | Inclination (°):

If Yes or Digitized, enter: Base Waypoint ID:

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

UTMs: UTME UTMN

Decimal degrees: LAT 34.749685 LONG -118.883171

Stand Size: <1 1–5 (>5) | Camera: MP Phone Photos: | View Radius 300m

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

Field Alliance name: Quercus john tuckeri

Comments: recording from a distance, can't see herbs other than bunch grass

% Cover: Conifer 3 | Hardwood 17 | Total Tree 20 | Regen Tree 0 | Shrub 13 | Herb r | Total Veg 30 | Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
+	Q. johntuckeri	17	S	E. fasciculatum	4			
S	A. glauca	7	S	H. whippeli	2			
+	P. monophylla	1						
+	J. californicus	2						

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

Recorder: MP **Other Surveyors:** LG, AJ, JV **Date:** 4-11-22 **Return?** ☐

Waypoint ID: HV017

UID:

Location Name:

GPS Name MP Phone **Projected?** No / (Yes) / Base / Digitized
If Yes, enter: **Bearing (°):** 196 **Distance (m):** 30 **Inclination (°):** 17
If Yes or Digitized, enter: **Base Waypoint ID:** _____
Base / Projected (circle one) Record either UTMs or Decimal Degrees GPS error: ft./(m.) **PDOP** 7
UTMs: UTME _____ **UTMN** _____
Decimal degrees: **LAT** 34.792014 **LONG** -118.837445

Stand Size: <1 1–5 (>5) **Camera:** MP phone **Photos:** facing south **View Radius** _____

Exposure, Actual °: 10' (N) NE NW SE SW Flat Variable | **Steepness, Actual °:** 26° 0° 1-5° >5-25° (>25)

Field Alliance name: Ericameria nauseosa

Comments: Hillside, shrubs in bloom, very green + grassy.

% Cover: Conifer r Hardwood 0 Total Tree r Regen Tree ~~1~~ – Shrub 23 Herb 40 Total Veg 50 Exotics (L,M,H) M

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Bladderpod	8		Juniper	r		Poa secunda	<1
	Ericameria nauseosa	15		Elymus condensatus	r		claytonia sp.	12
	Lupinus excubitus	1		Lupinus bicolor	r		non native grasses Bromus sp. mal.	30
	Marah macrocarpa	r		Erodium cicutarium	2		Cryptantha sp.	r
				Lomatium utriculatum				

Recorder: MP, LG **Other Surveyors:** **Date:** 4-11-22 **Return?** ☐

Waypoint ID: HV020

UID:

Location Name:

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 UTMs or Decimal Degrees GPS error: **ft./ m./ PDOP** _____
UTMs: UTME _____ **UTMN** _____
Decimal degrees: **LAT** 34.767898 **LONG** -118.870906

Stand Size: <1 1–5 >5 **Camera:** **Photos:** **View Radius** _____

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

Field Alliance name:

Comments: Dry looking John-tucker Oak. Drought stressed? OHV roads through. Understory mostly non-native grass

% Cover: Conifer 3 Hardwood Total Tree Regen Tree Shrub 16 Herb 20 Total Veg 25 Exotics (L,M,H) M

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Q. John-tuckeri	15		Sysimbrium altissimum	5		ambrosia	r
	Juniper	3		claytonia parviflora	1		Bromus spp.	15
	Ericameria linearifolia	1		Poa secunda	1			

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

Recorder: MP **Other Surveyors:** LG, AJ, SV **Date:** 4-12-22 **Return?** ☐

Waypoint ID: HV022

UID:

Location Name:

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 UTMs or Decimal Degrees GPS error: ft./(m.) **PDOP** 5

UTMs: UTME _____ **UTMN** _____

Decimal degrees: **LAT** 34.717467 **LONG** -118.824328

Stand Size: <1 1–5 (>5) **Camera:** MP phone **Photos:** (Y) N **View Radius** 200m

Exposure, Actual °: 180 NE NW SE (SW) Flat Variable | **Steepness, Actual °:** 2 0° (1-5°) >5-25° >25

Field Alliance name: A. tridentata may be most appropriate, but no perfect fit

Comments: E. fasc., Er. Nauseosa, A. triden. all co-dominate. Flat ish, sandy loam. Patches throughout valley where bladderpod, yerba santa, have higher cover. Shrubs are mature → decadent.

% Cover: Conifer T Hardwood – Total Tree – Regen Tree – Shrub 22 Herb 1 Total Veg 25 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Eriogonum fasciculatum	8		Gutierza	r		Bromus spp.	<1
	Ericameria nauseosa	7		Juniper	r		Marah	r
	Artemesia tridentata	7		Cryptantha sp.	<1		Eriodictyon crassifolium	r

M. whippei on edges near Juniper. (r)

Recorder: MP | Other Surveyors: LG | Date: 4-12-22 Return? ☐

Waypoint ID: HV023

UID:

Location Name:

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP _____

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.731075 LONG- 118.805594

Stand Size: <1 1–5 >5 | Camera: Photos: (N) | View Radius _____

Exposure, Actual °: 25 (NE) NW SE SW Flat Variable | Steepness, Actual °: 26 0° 1-5° > 5-25° (> 25)

Field Alliance name:

Comments: Hard to characterize this hillside - QJTs only on one edge, Alliance not obvious. See imagery - only map QJT on edge.

% Cover: Conifer _____ Hardwood _____ Total Tree _____ Regen Tree _____ Shrub 20 Herb 4 Total Veg 23 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	Q. John. Tuckeri	7		salvia mellifera	<1		S. nigra	r
	A. glauca	5		Ericameria linearifolia	r		Ceanothus sp?	4
	Adenostema fasc.	2		Poa secunda	4		M. whipplei	r
	Ephedra viridis	2		A. tridentata	r		E. fasciculatum	r

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

Recorder: MP | Other Surveyors: | Date: 4-13-22 Return? ☐

Waypoint ID: HV024

UID:

Location Name: near #79

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP _____

UTMs: UTME _____ UTMN _____

Decimal degrees: LAT 34.761898 LONG- 118.850894

Stand Size: <1 (1–5) >5 | Camera: MP phone Photos: | View Radius _____

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

Field Alliance name: Pinus monophylla

Comments: steep slope opposite #79. Piñon is consistent. Leah is checking manzanita ID. Photo taken from #79

% Cover: Conifer 4 Hardwood _____ Total Tree _____ Regen Tree _____ Shrub 17 Herb 20 Total Veg 38 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	P. monophylla	4		E. linearifolia	1			
	Q. John-Tuckeri	10		S. californicus	r			
	A. glauca	7		herbaceous - too far to see. Bromes	20			

Recorder: MP | Other Surveyors: | Date: 4-13-22 Return? ☐

Waypoint ID: HV025 | UID: | Location Name:

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP _____
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.766002 LONG - 118.860556

Stand Size: (<1) 1–5 >5 | Camera: | Photos: NO from point, facing SE → SW | View Radius _____

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

Field Alliance name: Cottonwood stand

Comments: Tiny wetland/riparian area. Spring fed ~5 cottonwoods, a few shrubby willows. Shrubs from adjacent hills, plus P. macrophylla, QJT, manzanita,

% Cover: Conifer ___ Hardwood ___ Total Tree 5 Regen Tree ___ Shrub 15 Herb ___ Total Veg 22 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
	P. fremontii	5		A. tridentata	5		L. subspicata dentata	<1
	Salix sp. (c)	+0		A. palmeri	<1		E. nauseosa	<1
	Juncus sp.	1		A. glauca	<1			

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

Recorder: MP | Other Surveyors: LG | Date: 4-15-22 Return? ☐

Waypoint ID: HV028 | UID: | Location Name:

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 UTMs or Decimal Degrees GPS error: ft./ m./ PDOP _____
UTMs: UTME _____ UTMN _____
Decimal degrees: LAT 34.759123 LONG - 118.898613

Stand Size: <1 1–5 (>5) | Camera: MP | Photos: (NW) | View Radius _____

Exposure, Actual °: 170 NE NW (SE) SW Flat Variable | Steepness, Actual °: 3 0° (1-5°) >5-25° >25

Field Alliance name:

Comments: Gently sloping valley. Alliances + shrubs composition varies throughout valley + isn't always obvious on imagery. Gravelly, yucca mixed in on W side of road. Eschscholzia cal. r

% Cover: Conifer r Hardwood — Total Tree — Regen Tree r Shrub 21 Herb 2 Total Veg 22 Exotics (L,M,H) L

Strata	Species	% cover	Strata	Species	% cover	Strata	Species	% cover
S	E. linearifolia	8	T	Juniper (young)	r	If	Bromus tectorum	<1
S	E. fasciculatum	7	H	Lasthenia fremontii	1	H	Stipa pulchra	r
S	E. cooperi	5	H	Layia glandulosa	<1	H	Amsinkia tesselata	r
S	E. nauseosa	1	H	E. cicutarium	<1	H	Plagiobothrys arizonica	r
S	Guterizia	<1		Coreopsis filaginifolia r			red midvein on undersid	

Date: ? ☐

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: Relevé or (RA)

Database #:	Date:	Name of recorder: MP
HV027	4-14-22	Other surveyors: LG · JV - LD
	UID:	Location Name:

GPS name: MP 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 39.808564 LONG 118.903397

GPS within stand? Yes / (No) If No, cite from GPS to stand: distance (m) 60 bearing° 140 inclination° 6

and record: Base point ID see fieldmaps Projected UTMs: UTME _____ UTMN _____

Camera Name: MP phone Cardinal photos at ID point: view across valley

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius____ m

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

Topography: Macro: top (upper) mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: sandy | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 0 BA Stems: 3 Litter: 5 Bedrock: 0 Boulder: 0 Stone: r Cobble: 2 Gravel: 3 Fines: 80 =100%

% Current year bioturbation — Past bioturbation present? Yes / (No) | % Hoof punch —

Fire evidence: (Yes) / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: *check date of last fire, 2015 -AJ

steep slopes with flannelbush - only spot in the park we've seen so many, burned snags of some oak, probably QJT. very direct mix, unique. Not sure how far stand extends over ridge - see notes in field maps. Road cuts through stand, wash/drainage below - has more yerba Santa, South facing slope to the north is Eriogonum fasciculatum alliance

Disturbance code / Intensity (L,M,H): ___/___ none except road ___/___ ___/___ ___/___ "Other" _____/___

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: Ceanothus greggii - Fremontodendron cal.

Field-assessed Association name (optional): Fremontodendron cal. fornicum - C. greggii Assoc.

Adjacent Alliances/direction: E fasc. to north on sparse, S facing slope /____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb E Shrub E Tree - Other identification or mapping information:

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

SPECIES SHEET

Database #: HV027

IV. VEGETATION DESCRIPTION

% NonVasc cover: ___ Total % Vasc Veg cover: 18

% Cover - Conifer tree / Hardwood tree: \ / r Regenerating Tree: ___ Shrub: 12 Herbaceous: 9

Height Class - Conifer tree / Hardwood tree: ___ / [redacted] Regenerating Tree: 3 Shrub: 4 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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
S	Fremontodendron californicum	7		
S	Eriodictyon crassifolium	2		
S	Malacothamnus fasciculatum	1		
S	Arctostaphylos glauca	<1		
S	Artemisia tridentata	<1		
S	Ericameria nauseosa	<1		
S	Ceanothus —	<1		
S	Keckiella ternata	r		
S	Cercocarpus betuloides	r		
S	Eriogonum fasciculatum var.pol.	1		
H	Elymus condensatus	<1		
H	Poa secunda	8		
H	Bromus rubens	r		
H	Penstemon grinnellii	r		
H	Erodium cicutarium	r		
S	Ephedra viridis	r		
H	Solanum xantii	r		
S	Ribes quercetorum	1		
T	Quercus john-tuckeri	r		
H	Cryptantha sp.	r		

"Fire Followers"

Unusual species: ___

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type: Alliance / Association	circle: Relevé or RA

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #:	Date: 04/11/2022	Name of recorder: JV
		Other surveyors: AH, LG, MP
	UID: 7	Location Name: HUSVRA

GPS name: _____ 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 34.769194 LONG 118.871569

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AJ Phone Cardinal photos at ID point: N E S W

Other photos:

Stand Size (acres): <1, (1-5,) >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x____ m | RA Radius 106 m

Exposure, Actual °: 206 NE NW SE (SW) Flat Variable | Steepness, Actual °: 3.6 0° (1-5°) >5-25° >25

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat (concave) undulating

Geology code: _____ Soil Texture code: _____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H₂0: 0 BA Stems: 10 Litter: 6 | Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 1 Gravel: 4 Fines: 85 =100%

% Current year bioturbation 1 Past bioturbation present? (Yes) / No | % Hoof punch 5

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: In a relatively flat bowl w/ lots of rilling & surrounded by oak stands

Disturbance code / Intensity (L,M,H): 05/M OHV/H ___/___ ___/___ ___/___ "Other" _____/___

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: Eriogonum Nauseosa alliance

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb P Shrub P Tree X Other identification or mapping information:

#7

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

Database #: _____

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 55

% Cover - **Conifer tree / Hardwood tree:** <1 / — **Regenerating Tree:** — **Shrub:** 26 **Herbaceous:** 31

Height Class - Conifer tree / Hardwood tree: 4 / — **Regenerating Tree:** — **Shrub:** 2 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
S	Ericameria nauseosa	14	T	Juniperus californicus <1
S	Ericameria linearifolia	9		
S	Ericameria cooperi	<1	S	Hesperoyucca whipplei r
S	Peritoma arborea	r		
S?	Eriogonum sp. roseum	2		
S	Eriogonum fasciculatum polifolium	r		
H	Amsinkia tessellata	13	H	Acmispon sp r
H	Erodium cicutarium	2	H	Poa secunda r
H	Astragalus douglasii	r		
H	Mentzelia veatchiana	<1		
H	Cryptantha sp.	r		
H	Corythrogyne filaginifolia	<1		
H	Descurainia pinnata	1		
H	Bromus tectorum? spp.	r		
H	Bromus rubens?	14		
H	Dichelostemma capitata	r		
H	Hordeum sp. (rye grass)	r		~~Sagwort~~
H	sisymbrium ~~sp~~ altissimum	<1		
H	Lupinus sp	r		
H	Phacelia sp	r		

Unusual species: _____

Plot 45
- shrubs = Early
- get rid of association

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type: Alliance / Association	circle: Relevé or RA

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | Date: 04/12/22 | Name of recorder: JV | Other surveyors: AH, LG, MP | UID: 14 | Location Name: HUSVRA

GPS name: _____ 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 34.720732 LONG 118.822621

GPS within stand? Yes / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AH Phone Cardinal photos at ID point: NESW

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 50 m

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

Topography: Macro: top upper (mid) lower bottom | Micro: convex flat concave (undulating)

Geology code: _____ Soil Texture code: MESA | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 0 BA Stems: 3 Litter: 2 Bedrock: 0 Boulder: 0 Stone: <1 Cobble: | Gravel: 40 Fines: 54 =100%

% Current year bioturbation 1 Past bioturbation present? (Yes) / No | % Hoof punch 5

Fire evidence: (Yes) / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: historic fire

undulating hills around plot center but chamise & scrub oaks are the edge

Disturbance code / Intensity (L,M,H): 05/L ___/___ ___/___ ___/___ ___/___ "Other" _____/___

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: Eriogonum fasciculatum

Field-assessed Association name (optional): Eriogonum fasciculatum - Hesperoyucca whipplei

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb P Shrub E Tree ____ Other identification or mapping information:

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

SPECIES SHEET

Database #: _____

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 25

% Cover - **Conifer tree / Hardwood tree:** —/— **Regenerating Tree:** 5 **Shrub:** 24 **Herbaceous:** 1

Height Class - Conifer tree / Hardwood tree: —/— **Regenerating Tree:** 2 **Shrub:** 2 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
S	Eriogonum fasciculatum	15		
S	Hesperoyucca whipplei	5		
S	Eriodictyon crassifolium	2		
S	Ericameria linearifolia	1		
S	Purshia stansburriana	1		
S	Acmispon glaber	<1		
H	Dichelostemma capitata	r		
H	Chaenactis glabriuscula	r		
H	Uropappus lindleyi	r		
H	Salvia columbariae	r		
H	Bromus rubens	r		
H	Erodium cicutarium	r		
H	Euphorbia sp.	r		
H	Cryptantha sp.	r		
H	Lomatium mojavense	r		
H	Leptosyne bigelovii	r		
H	Melica imperfecta	r		
H	Poa secunda	r		
S	Quercus johnstonii	r		
T	Juniperus californicus	r		

Unusual species: _____

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: Relevé or (RA)

Database #: | **Date:** 4-12-22 | **Name of recorder:** AH | **Other surveyors:** JV, LG, MP | **UID:** 18 | **Location Name:** HVSNRA

GPS name: S9 GALAXY | 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** 34.717946 **LONG** -118.824867

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: **Base point ID** _____ **Projected UTMs: UTME** _____ **UTMN** _____

Camera Name: AJ S9 **Cardinal photos at ID point:** NESW

Other photos:

Stand Size (acres): <1, (1-5), >5 | **Plot Area (m²):** 100 / _____ | **Plot Dimensions** ____ x ____ m | **RA Radius** 40 m

Exposure, Actual °: 165 NE NW (SE) SW Flat Variable | **Steepness, Actual °:** 1 0° (1-5°) >5-25° >25

Topography: Macro: top upper mid (lower) bottom | Micro: convex (flat) concave undulating

Geology code: _____ **Soil Texture code:** MESA | (Upland) or **Wetland/Riparian** (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H₂0: Ø **BA Stems:** 3 **Litter:** 2 **Bedrock:** Ø **Boulder:** Ø **Stone:** Ø **Cobble:** 1 **Gravel:** 30 **Fines:** 64 **=100%**

% Current year bioturbation 1 **Past bioturbation present?** (Yes) / No | **% Hoof punch** 1

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

WASH, VERBA SANTA ISLAND AT PLOT CENTER BUT VARIED 10M OUT, NEW VOLUNTEER MX TRAILS

Disturbance code / Intensity (L,M,H): 05/L 02/M ___/___ ___/___ ___/___ **"Other"** _____/___

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: (deemed) Lotus scoparius - Lupinus albifrons - Eriodyction spp.

Field-assessed Association name (optional): Eriodictyon crassifolium

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L (M) H **Explain:** doesn't fit perfectly into alliance

Phenology (E,P,L): Herb E **Shrub** E **Tree** ____ **Other identification or mapping information:**

Page 1

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

Database #: 18

IV. VEGETATION DESCRIPTION

% NonVasc cover: ___ Total % Vasc Veg cover: 20

% Cover - Conifer tree / Hardwood tree: -/- Regenerating Tree: - Shrub: 22 Herbaceous: 2

Height Class - Conifer tree / Hardwood tree: -/- Regenerating Tree: - Shrub: 3 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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
S	Eriodictyon crassifolium	7		
S	Ericameria nauseosa	2		
S	Ericameria cooperi	r		
S	Sambucus nigra	r		
S	Lepidospartum squamatum	5		
S	Artemesia tridentata	4		
S	Encelia actoni	r		
S	Peritoma arborea	r		
S	Hesperoyucca whipplei	2		
H	Opuntia basilaris	r		
S	Eriogonum fasciculatum	<1		
N	Astragalus douglasii	r		
H	Marah macrocarpa	r		
H	Cryptanth sp.	r		
H	Salvia columbariae	r		
H	Emmenanthe pendulifolia	r		
H	Oenothera californica	r		
H	Calyptridium mondantum	r		
H	Eriastrum densiflorum	r		

Unusual species: _____

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: **Relevé** or **RA**

Database #:

Date: 04/13/22

UID: 24

Name of recorder: JV

Other surveyors: AH, LG, MR, LO

Location Name: HVSVRA

GPS name: _____ 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** 34.761785 **LONG** 118.865838

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: **Base point ID** _____ **Projected UTMs: UTME** ___ ___ ___ ___ ___ ___ **UTMN** ___ ___ ___ ___ ___ ___ ___

Camera Name: AHPhone **Cardinal photos at ID point:** NESW

Other photos:

Stand Size (acres): <1, (1-5), >5 | **Plot Area (m²):** 100 / _____ | **Plot Dimensions** ____ x ____ m | **RA Radius** 30 m

Exposure, Actual °: 46 (NE) NW SE SW Flat (Variable) | **Steepness, Actual °:** 11.3 0° 1-5° (>5-25°) >25

Topography: Macro: top (upper) mid lower bottom | **Micro:** convex flat (concave) undulating

Geology code: _____ **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)

H_2O: 0 **BA Stems:** 3 **Litter:** 10 **Bedrock:** 0 **Boulder:** 0 **Stone:** 0 **Cobble:** 0 **Gravel:** <1 **Fines:** 87 **=100%**

% Current year bioturbation 1 **Past bioturbation present?** (Yes) / No | **% Hoof punch** 1

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: area around plot center w/ junipers, scrub oaks, & pinons. Vantage point up above plot center

Disturbance code / Intensity (L,M,H): 05/L ___/___ ___/___ ___/___ ___/___ **"Other"** _____/___

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: Quercus johnstonii

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L (M) **H** **Explain:** _____

Phenology (E,P,L): Herb E **Shrub** E **Tree** ____ **Other identification or mapping information:**

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

Database #: 24

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 13

% Cover - Conifer tree / Hardwood tree: 8 / — **Regenerating Tree:** 0 **Shrub:** 10 **Herbaceous:** <1

Height Class - Conifer tree / Hardwood tree: 4 / — **Regenerating Tree:** — **Shrub:** 3 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
T	Juniperus californica	7		
S	Quercus john-tuckeri	8		
T	Pinus monophylla	1		
S	Ericameria linearifolia	1		
S	Arctostaphylos glauca	<1		
S	Eriogonum fasciculatum	r		
H	Poa secunda	r		
H	Claytonia sp.	r		
H	Gilia sp.	r		
H	Stipa speciosa	r		
H	Lomatium mohavense	r		
H	Cryptanth sp.	r		
H	Descurainia pinnata	r		
H	Dichelostema capitata	r		
H	Eriastrum sp.	r		

Unusual species: _____

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: Relevé or RA

Database #:	Date: 04/11/22	Name of recorder: JV
		Other surveyors: AH, LG, MP
	UID: 41	Location Name: HVSVRA

GPS name: _____ 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 34.734853 LONG 118.867180

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AH Phone Cardinal photos at ID point: NESW

Other photos:

Stand Size (acres): (<1,) 1-5, >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 20 m

Exposure, Actual °: _____ NE NW SE SW Flat (Variable) | Steepness, Actual °: 7 0° 1-5° (>5-25°) >25

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat (concave) undulating

Geology code: _____ Soil Texture code: _____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 0 BA Stems: 3 Litter: 8 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 24 Gravel: 25 Fines: 64 =100%

% Current year bioturbation 2 Past bioturbation present? (Yes) / No | % Hoof punch 5

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: @ plot center looking out on bowl & characterizing that.

Disturbance code / Intensity (L,M,H): 05 / L OHV / L ___/___ ___/___ ___/___ ___/___ "Other" _____/___

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: Juniper

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: Should be Juniper Yucca Association

Phenology (E,P,L): Herb P Shrub P Tree X Other identification or mapping information:

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

#41

Database #: _____ SPECIES SHEET

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 35

% Cover - **Conifer tree / Hardwood tree:** 5 / — **Regenerating Tree:** <1 **Shrub:** 33 **Herbaceous:** 2

Height Class - Conifer tree / Hardwood tree: 4 / — **Regenerating Tree:** 2 **Shrub:** 2 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
S	Juniperus californicus	5		
S	Hesperoyucca whipplei	10		
S	Ericameria linearifolia	15		
S	Salvia dorrii	3		
S	Eriogonum fasciculatum	2		
S	E. fas. polifolium	r		
S	Eriodyction crassifolium	r		
H	Opuntia basilaris	r		
H	Lasthenia californica	<1		
H	Layia glandulosa	r		
H	Castilleja linearifolia	r		
H	Bromus rubra	r		
H	Leptosyne bigelovii	r		
H	Stipa speciosa (tall + wiry)	r		
H	Salvia columbariea	r		
H	(pink, grass) Poa secunda?	r		
H	Amsinkia tesselata	r		
H	Boechera pulchra	r		
H	Leptosyphon aurea	r		
H	Pectocarya sp.	r		

Unusual species: _____

cooperi = head of multiple flowers

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type: Alliance / Association	circle: Relevé or (RA)

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | Date: 04/12/22 | UID: 45 | Name of recorder: JV | Other surveyors: AH, LG, MP | Location Name: HVSVRA

GPS name: _____ 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 34.726571 LONG 118.837874

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AH Phone Cardinal photos at ID point: NESW

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 30 m

Exposure, Actual °: 146 NE NW (SE) SW Flat Variable | Steepness, Actual °: 3.8 0° (1-5°) >5-25° >25

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat (concave) undulating

Geology code: _____ Soil Texture code: COLS | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H₂0: 0 BA Stems: 2 Litter: 4 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: <1 Gravel: 40 Fines: 54 =100%

Have 14 not sure how Make up to %

% Current year bioturbation 2 Past bioturbation present? (Yes) / No | % Hoof punch 1

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: in the valley @ pbt 45 w/ hillsides on either side as boundary.

Disturbance code / Intensity (L,M,H): 05 / L ___/___ ___/___ ___/___ ___/___ "Other" _____/___

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: Eriogonum fasciculatum

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb P Shrub E Tree X Other identification or mapping information:

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Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

SPECIES SHEET

Database #: _____

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 30

% Cover - **Conifer tree / Hardwood tree:** juniper / — **Regenerating Tree:** 0 **Shrub:** 27 **Herbaceous:** 7

Height Class - Conifer tree / Hardwood tree: — / — **Regenerating Tree:** — **Shrub:** 3 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
S	Hesperoyucca whipplei	2		
S	Eriogonum fasciculatum	9		
S	Ephedra viridis	7		
S	Ericameria nauseosa	5		
S	Encelia actonii	1		
S	Artemisia tridentata	3		
H	Leymus condensatus	r		
H	Marah macrocarpa	r		
H	Poa secunda	r		
H	Stipa speciosa	r		
H	Bromus rubens	<1		
H	Amsinkia tessellata	5		
H	Layia glandulosa	r		
H	Mirabilis laevis	r		
H	Chaenactis xantiana	r		
H	Phacelia distans	r		
H	Dichelostemma capitata	r		
H	Opuntia basilaris	r		
H	Leptosyphon aureus	r		
H	Eriogonum sp.	r		

Unusual species: _____

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use:	Final database #:	Final vegetation type: Alliance / Association	circle: Relevé or RA

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | Date: 4-11-22 | Name of recorder: AH | Other surveyors: JV, MP, LG | UID: 57 | Location Name: HVSURA

GPS name: _____ 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 34.786424 LONG 118.885091

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AJ PHONE Cardinal photos at ID point: NESW (NW 10M OF PLOT CENTER)

Other photos:

Stand Size (acres): (<1) 1-5, >5 | Plot Area (m²): 100 / _____ | Plot Dimensions 10 x 10 m | RA Radius____ m

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

Topography: Macro: top (upper) mid lower bottom | Micro: (convex) flat concave undulating

Geology code: _____ Soil Texture code: MELO | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_2O: Ø BA Stems: 2 Litter: | Bedrock: Ø Boulder: Ø Stone: Ø Cobble: Ø Gravel: 4 Fines: 93 =100%

% Current year bioturbation 1 Past bioturbation present? (Yes) / No | % Hoof punch 5

Fire evidence: (Yes) / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments:

FIRE: BURNED AREA JULY 31ST 2021

NATIVE GRASSLANDS, ON TOP OF A HILL WITH MODERATE SLOPES,

Alliances vary throughout. Patchwork of puppys, fiddleneck, & Phacelia

Disturbance code / Intensity (L,M,H): 05 / M ___/___ ___/___ ___/___ ___/___ "Other" FIRE / M

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: Amsinckia - Phacelia spp.

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____ / _____, _____ / _____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb P Shrub E Tree X Other identification or mapping information:

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

Database #: 57

IV. VEGETATION DESCRIPTION

% NonVasc cover: — **Total % Vasc Veg cover:** 6

% Cover - **Conifer tree / Hardwood tree:** —/— **Regenerating Tree:** — **Shrub:** 1 **Herbaceous:** 20

Height Class - **Conifer tree / Hardwood tree:** —/— **Regenerating Tree:** — **Shrub:** 1 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
H	Amsinkia tessellata	4		
H	Erodium cicutaria	13		
H	Phacelia ciliata	2		
H	Mentzelia veatchiana	r		
H	Dichelostema capitata	1		
H	Lupinus bicolor	<1		
H	Calystegia occidentalis	<1		
H	Bromus tectorum	r		
H	Bromus rubens	r		
H	Poa secunda	1		
H	Claytonia parviflora	r		
S	Eriogonum sp.	<1		
S	Ericameria nauseosa	1		
H	Uropappus lindleyi	r		
H	Descurainia	r		
H	Lupinus sp.	r		
H	Lomatium utriculatum	<1		
H	Eschscholzia californicum	r		(MANY OUTSIDE 10X10 PLOT)

Unusual species:

ripgut brome - gives resistance if rub backward B. diandres

Combined Vegetation Rapid Assessment and Relevé Field Form

(Revised March 27, 2018)

For Office Use: | **Final database #:** | **Final vegetation type:** Alliance _____ Association _____ | circle: **Relevé** or **RA**

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | **Date:** 04/12/22 | **Name of recorder:** JV | **Other surveyors:** AH, LG, MP | **UID:** 72 | **Location Name:** HUSVRA

GPS name: _____ 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** 34.709655 **LONG** 118.816461

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: **Base point ID** _____ **Projected UTMs: UTME** _____ **UTMN** _____

Camera Name: AH phone **Cardinal photos at ID point:** NESW

Other photos: 13139

Stand Size (acres): <1, 1-5, >5 | **Plot Area (m²):** 100 / _____ | **Plot Dimensions** ____x____ **m** | **RA Radius** 60m

Exposure, Actual °: 156 NE NW (SE) SW (Flat) Variable | **Steepness, Actual °:** 2 0° (1-5°) >5-25° >25

Topography: Macro: top upper mid (lower) bottom | **Micro:** convex (flat) concave undulating

Geology code: _____ **Soil Texture code:** COLS | (Upland) or **Wetland/Riparian** (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H2O: 0 **BA Stems:** 3 **Litter:** 75 **Bedrock:** 0 **Boulder:** 0 **Stone:** 0 **Cobble:** 0 **Gravel:** 2 **Fines:** 20 **=100%**

% Current year bioturbation 1 **Past bioturbation present?** (Yes) / No | **% Hoof punch** 1

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: long strip along roadway starting from plot center zone & stretching SE includes oaks @ beginning & end.

enhance stand → by planting oaks

rdust, weeds, trash

Disturbance code / Intensity (L,M,H): 05 / M ___/___ ___/___ ___/___ ___/___ **"Other"** road / 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: Quercus lobata Woodland / Forest

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____ / _____, _____ / _____

Confidence in Alliance identification: L M (H) **Explain:** _____

Phenology (E,P,L): Herb E **Shrub** E **Tree** E **Other identification or mapping information:**

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SPECIES SHEET

Database #: 72

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 17

% Cover - **Conifer tree / Hardwood tree:** X / 6 **Regenerating Tree:** 0 **Shrub:** 7 **Herbaceous:** 14

Height Class - Conifer tree / Hardwood tree: X / 5 **Regenerating Tree:** X **Shrub:** 3 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
T	Quercus lobata	6		
S	Ericameria nauseosa	1		
S	Ericameria palmeri	3		
S	Peritoma arborea	<1		
S	Eriodictyon crassifolium	2		
S	Rhamnus ilicifolia	r		
S	Eriogonum fasciculatum	r		
H	Bromus diandrus	10		
H	Bromus tectorum	4		
H	Blitum californicum	r		
S	Lonicera subspicata ssp denudata	r		
H	Uropappus lindleyi	r		
H	eriogonum spp.	r		
S	Phoradendron (mistletoe) leucarpum	1		

Unusual species:

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For Office Use: | Final database #: | Final vegetation type: Alliance / Association | circle: Relevé or RA

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | Date: 04/13/22 | Name of recorder: AH | Other surveyors: JV, MP, LG, LV | UID: 77 | Location Name: HVSVRA

GPS name: S9 AJ — 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 34.768176 LONG -118.852292

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID ____ Projected UTMs: UTME ___ UTMN ___

Camera Name: AJ 59 Cardinal photos at ID point: NESW 1100AM

Other photos: DATASHEET PHOTO TAKEN AFTER NESW

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / ____ | Plot Dimensions ____ x ____ m | RA Radius 30 m

Exposure, Actual °: 343 NE (NW) SE SW Flat Variable | Steepness, Actual °: 0.5 0° 1-5° >5-25° >25

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat (concave) undulating

Geology code: ____ Soil Texture code: MESN | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H₂0: Ø BA Stems: 2 Litter: 3 Bedrock: Ø Boulder: Ø Stone: 5 Cobble: 3 Gravel: 35 Fines: 57 =100%

% Current year bioturbation 1 Past bioturbation present? (Yes) No | % Hoof punch 1

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: by plot center in lowlands of wash, not up hillsides. dead manzanita) & one dead pinon. dry wash but not active currently.

Disturbance code / Intensity (L,M,H): 05 / L ___/___ ___/___ ___/___ ___/___ "Other" ____/___

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: Arctostaphylos glauca shrubland

Field-assessed Association name (optional): ____

Adjacent Alliances/direction: ____/____, ____/____

Confidence in Alliance identification: L M (H) Explain: ____

Phenology (E,P,L): Herb E Shrub E Tree ____ Other identification or mapping information:

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SPECIES SHEET

Database #: 77

IV. VEGETATION DESCRIPTION

% NonVasc cover: r **Total % Vasc Veg cover:** 17

% Cover - **Conifer tree / Hardwood tree:** r / — **Regenerating Tree:** — **Shrub:** 18 **Herbaceous:** 1

Height Class - Conifer tree / Hardwood tree: 4 / — **Regenerating Tree:** — **Shrub:** 3 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
S	Arctostaphylos glauca	7		
S	Lepidospartum squamatum	3		
S	Ericameria nauseosa	4		
S	Artemesia tridentata	<1		
S	Eriogonum fasciculatum	1		
S	Peritoma arborea	<1		
S	Acmispon glaber	r		
T	Pinus monophylla	r		
T	Juniperus californicus	r		
S	Quercus john-tuckeri	<1		
S	Guiteurezia sarothrae	r		
S	Ephedra viridis	r		
S	Hesperoyucca whipplei	r		
S	Artemisia palmeri	1		
H	Bromus sp.	r		
H	Laeseliastrum schottii	r		
H	Erodium cicutarium	r		
H	Eremothera boothii	r		
H	Cryptantha spp.	r		

SCALE — BROOME

Unusual species: _____

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For Office Use:	Final database #:	Final vegetation type: Alliance / Association	circle: Relevé or RA

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Database #: | Date: 04/13/22 | UID: 79 | Name of recorder: JV | Other surveyors: AH, MP, LG, LD | Location Name: HJSVRA

GPS name: _____ 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 34.762410 LONG 118.850797

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME _____ UTMN _____

Camera Name: AH Phone Cardinal photos at ID point: NESW

Other photos:

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 25 m

Exposure, Actual °: 258 NE NW SE (SW) Flat (Variable) | Steepness, Actual °: 13 0° 1-5° (>5-25°) >25

Topography: Macro: top upper (mid) lower bottom | Micro: convex flat concave (undulating)

Geology code: _____ Soil Texture code: MCSL | (Upland) or Wetland/Riparian (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_2O: 0 BA Stems: 3 Litter: 2 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 1 Gravel: 45 Fines: 49 =100%

% Current year bioturbation 1 Past bioturbation present? (Yes) / No | % Hoof punch 1

Fire evidence: Yes / (No) (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: climbed up steep hill on backside & looked out at bowl/valley. Hillsides marked edges. Juniper yucca stand, not pinon hillside.

Disturbance code / Intensity (L,M,H): 05/L ___/___ ___/___ ___/___ ___/___ "Other" _____/___

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: Juniperus californica woodland

Field-assessed Association name (optional): Juniperus californica (Cercocarpus montanus-Fraxinus dipetala)

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: _____

Phenology (E,P,L): Herb E Shrub E Tree E Other identification or mapping information:

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SPECIES SHEET

Database #: _____

IV. VEGETATION DESCRIPTION

% NonVasc cover: 0 **Total % Vasc Veg cover:** 13

% Cover - **Conifer tree / Hardwood tree:** 7 / — **Regenerating Tree:** 0 **Shrub:** 8 **Herbaceous:** 7

Height Class - Conifer tree / Hardwood tree: 4 / — **Regenerating Tree:** — **Shrub:** 3 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular

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

Stratum	Species	% cover	C	Final species determination
T	Juniperus californicus	7		
S	Quercus john. tuckeri	1		
S	Hesperoyucca whipplei	3		
S	Ericameria linearifolia	1		
S	Eriogonum fasciculatum (pol.)	3		
S	Ephedra viridis	r		
H	Amsinkia tessellata	r		
H	Leptosyne bigelovii	r		
H	Stipa speciosa	r		
H	Melica imperfecta	r		
H	Phacelia distans	r		
H	Bromus sp.	6		
H	Salvia columbariae	r		
H	Cryptantha sp.	r		
H	Poa secunda	r		
H	Mentzelia veatchiana	r		
H	Caulanthus coulteri	r		
H	Bromus rubens	r		
T	Pinus monophylla	<1		
S	Arctostaphylos glauca	r		
H	Leymus condensatus	r		

Unusual species: _____

rangefinder
compass
camera
water bottle
compass

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: Relevé or (RA)

Database #:	Date: 04/14/2022	Name of recorder: Jessi Vannatta
		Other surveyors: AJ. Heredia, Leah Gardner, Melissa Patten
	UID: 101	Location Name: Hungry Valley SVRA

GPS name: _____ 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 ___ ___ . ___ ___ ___ ___ ___ LONG ___ ___ ___ . ___ ___ ___ ___ ___

GPS within stand? (Yes) / No If No, cite from GPS to stand: distance (m) ____ bearing ° ____ inclination ° ____

and record: Base point ID _____ Projected UTMs: UTME ___ ___ ___ ___ ___ UTMN ___ ___ ___ ___ ___ ___

Camera Name: Alt Phone Cardinal photos at ID point: 08:59

Other photos: Photos taken just above cottonwood by plot center

Stand Size (acres): <1, (1-5), >5 | Plot Area (m²): 100 / _____ | Plot Dimensions ____ x ____ m | RA Radius 40 m

Exposure, Actual °: 110 NE NW SE SW Flat Variable | Steepness, Actual °: _____ 0° 1-5° >5-25° >25

where you are in watershed

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat (concave) undulating

Geology code: _____ Soil Texture code: MFCL | Upland or (Wetland/Riparian) (circle one)

% Surface cover: (Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

H_20: 5 BA Stems: 5 Litter: 79 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: < | Gravel: 1 Fines: 10 =100%

% Current year bioturbation 3 Past bioturbation present? (Yes) / No | % Hoof punch 0

Fire evidence: Yes / No (circle one) If yes, describe in Site history section, including date of fire, if known.

Site history, stand age, comments: in flat area where creek is but steep slopes ~45° on each side

Cottonwood & willow stand w/ an abundance of peppermint. Road on one side & freeway on other. Riparian area. Wind has affected trees. More upland plant species on slopes. Downed & damaged cottonwoods

[wind damage

Disturbance code / Intensity (L,M,H): 05/H 13/M 15/L ___/___ ___/___ "Other" _____/___

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: 11B.6 Populus fremontii Cottonwood - Willow

Field-assessed Association name (optional): _____

Adjacent Alliances/direction: _____/_____, _____/_____

Confidence in Alliance identification: L M (H) Explain: Not an association for sitenv willo

Phenology (E,P,L): Herb P Shrub P Tree P Other identification or mapping information:

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SPECIES SHEET

Database #: 101

IV. VEGETATION DESCRIPTION

% NonVasc cover: Ø **Total % Vasc Veg cover:** 60

% Cover - **Conifer tree / Hardwood tree:** – / 11 **Regenerating Tree:** Ø **Shrub:** 11 **Herbaceous:** 34

Height Class - Conifer tree / Hardwood tree: – / 5 **Regenerating Tree:** Ø **Shrub:** 2 **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

Stratum categories: T=Tree, A = SApling, E = SEedling, S = Shrub, H= Herb, N= Non-vascular
% Cover Intervals for reference: r = trace, + = <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Stratum	Species	% cover	C	Final species determination
T	Populus freemontii	5		
T	Salix lasiandra	6		
T	Sambucus ~~cerulea~~ nigra	1		
S	Ericameria nauseosa	6		
S	Peritoma arborea	5		
S	Baccharis pilularis	r		
H	Lepidium latifolium	30		
H	Descurinia pinnata	<1		
H	Anthriscus caucalis	<1		
H	Bromus tectorum	<1		
H	Bromus rupens	<1		
H	unknown thistle	r		
H	Claytonia parviflora	r		
	other weedy mustardst grasses + thistles	r		

Unusual species: _____

Appendix C: Plant species list

Hungry Valley Plant Species List by Family (updated May 2023 by Leah Gardner)

*=non-native **=invasive

Family	Scientific Name	Common Name
Adoxaceae	*Sambucus nigra ssp. caerulea*	Blue Elderberry
Agavaceae	*Hesperoyucca whipplei*	Chaparral Yucca
Agavaceae	*Yucca brevifolia*	Joshua Tree
Anacardiaceae	*Rhus aromatica*	Fragrant Sumac
Apiaceae	*Anthriscus caucaulis*	Bur chervil*
Apiaceae	*Apium graveolens*	Celery*
Apiaceae	*Berula erecta*	Cut leaved water parsnip
Apiaceae	*Lomatium mohavense*	Mojave Desert Parsley
Apiaceae	*Lomatium utriculatum*	Hog fennel
Apocynaceae	*Asclepias erosa*	Desert Milkweed
Apocynaceae	*Asclepias fascicularis*	Narrow Leaf Milkweed
Asteraceae	*Agoseris retrorsa*	Spear-leaved Agoseris
Asteraceae	*Ambrosia dumosa*	Burro Weed, White Bursage
Asteraceae	*Ambrosia psilostachya*	Western Ragweed
Asteraceae	*Ancistrocarphus filagineus*	Wooly fishhooks
Asteraceae	*Artemisia californica*	California Sagebrush
Asteraceae	*Artemisia palmeri*	San Diego Sagewort
Asteraceae	*Artemisia tridentata*	Great Basin Sagebrush
Asteraceae	*Baccharis salicifolia*	Mulefat
Asteraceae	*Baileya multiradiata*	Desert Marigold
Asteraceae	*Balsamorhiza deltoidea*	Deltoid Balsam Root
Asteraceae	*Brickellia californica*	California Bricklebush
Asteraceae	*Centaurea benedicta*	Blessed Thistle**
Asteraceae	*Centaurea solstitialis*	Yellow Star Thistle**
Asteraceae	*Chaenactis fremontii*	Fremont Pincushion
Asteraceae	*Chaenactis glabriuscula*	Yellow Pincushion
Asteraceae	*Chaenactis stevioides*	Desert pincushion
Asteraceae	*Chaenactis xantiana*	Fleshy Pincushion
Asteraceae	*Cirsium mohavense*	Mohave Thistle
Asteraceae	*Cirsium occidentale*	Cobwebby Thistle, Western Thistle
Asteraceae	*Cirsium occidentale var.venustum*	Cobwebby Thistle, Venus Thistle
Asteraceae	*Corethrogyne filaginifolia*	California Sandaster
Asteraceae	*Encelia actoni*	Acton's Encelia

Asteraceae	*Encelia virginensis*	Virginia River Encelia
Asteraceae	*Ericameria cooperi*	Cooper's Goldenbush
Asteraceae	*Ericameria linearifolia*	Linear-leaved Goldenbush
Asteraceae	*Ericameria nauseosa*	Rubber Rabbitbrush
Asteraceae	*Ericameria parryi*	Parry’s Rabbitbrush
Asteraceae	*Erigeron foliosus*	Leafy Fleabane
Asteraceae	*Eriophyllum confertiflorum*	Golden Yarrow
Asteraceae	*Eriophyllum pringlei*	Pringle’s Wooly Sunflower
Asteraceae	*Grindelia sp.*	Gumplant
Asteraceae	*Gutierrezia sarothrae*	Matchweed
Asteraceae	*Helianthus annuus*	Common Sunflower
Asteraceae	*Heterotheca grandiflora*	Telegraph Weed
Asteraceae	*Lagophylla ramosissima*	Common Hareleaf
Asteraceae	*Lasthenia californica*	Goldfields
Asteraceae	*Lasthenia gracilis*	Cal. Goldfields
Asteraceae	*Layia glandulosa*	White Tidy Tips
Asteraceae	*Layia platyglossa*	Coastal Tidy Tips
Asteraceae	*Lepidospartum squamatum*	Scalebroom
Asteraceae	*Leptosyne californica*	California Coreopsis
Asteraceae	*Leptosyne douglasii*	Douglas' Coreopsis
Asteraceae	*Lesptosyne bigelovii*	Bigelow's Corepsis
Asteraceae	*Lessingia glandulifera*	Valley Lessingia
Asteraceae	*Malacothrix californica*	California Desert Dandelion
Asteraceae	*Malacothrix glabrata*	Desert Dandelion
Asteraceae	*Matricaria discoidea*	Pineapple Weed
Asteraceae	*Monolopia lanceolata*	Common Monolopia
Asteraceae	*Monoptilon bellidiforme*	Desert Star
Asteraceae	*Packera breweri*	Brewer's Ragwort
Asteraceae	*Pseudognaphalium sp.*	Cudweed
Asteraceae	*Rafinesquia neomexicana*	Desert Chicory
Asteraceae	*Senecio flaccidus*	Shrubby Ragwort
Asteraceae	*Solidago sp.*	Goldenrod
Asteraceae	*Stephanomeria pauciflora*	Brownplume wirelettuce,Desert Straw
Asteraceae	*Stephanomeria virgata ssp. pleurocarpa*	Wand Wirelettuce
Asteraceae	*Stylocline gnaphaloides*	Everlasting neststraw
Asteraceae	*Tragopogon porrifolius*	Purple Salsify*
Asteraceae	*Uropappus lindleyi*	Silver Puffs
Asteraceae	*Wyethia ovata*	Southern Mule Ears
Asteraceae	*Xylorhiza tortifolia*	Mojave Aster

Boraginaceae	*Amsinckia menziesii var. intermedia*	Common fiddleneck
Boraginaceae	*Amsinckia tessellata*	Fiddleneck
Boraginaceae	*Cryptantha circumscissa*	Western Forget-me-not
Boraginaceae	*Cryptantha pterocarya*	Wingnut Cryptantha
Boraginaceae	*Emmenanthe penduliflora*	Whispering Bells
Boraginaceae	*Eriodictyon crassifolium*	Thickleaf Yerba Santa
Boraginaceae	*Eriodictyon parryi*	Poodle-dog Bush
Boraginaceae	*Eucrypta chrysanthemifolia*	Spotted Eucrypta
Boraginaceae	*Heliotropium curassavicum*	Alkali Heliotrope
Boraginaceae	*Nama demissum*	Purple Mat
Boraginaceae	*Nemophila menziesii*	Baby Blue Eyes
Boraginaceae	*Pectocarya penicillata*	Winged Combseed
Boraginaceae	*Pectocarya setosa*	Moth Combseed
Boraginaceae	*Phacelia ciliata*	Great Valley Phacelia
Boraginaceae	*Phacelia distans*	Distant Phacelia
Boraginaceae	*Phacelia egena*	Rock Phacelia
Boraginaceae	*Phacelia fremontii*	Fremont’s Phacelia
Boraginaceae	*Phacelia imbricata*	Imbricate Phacelia
Boraginaceae	*Phacelia tanacetifolia*	Lacy Phacelia
Boraginaceae	*Plagiobothrys arizonicus*	Arizona Popcorn Flower
Brassicaceae	*Boechera pulchra*	Beautiful Rockcress
Brassicaceae	*Brassica nigra*	Black Mustard**
Brassicaceae	*Caulanthus coulteri*	Coulter's Jewel Flower
Brassicaceae	*Erysimum capitatum*	Western Wallflower
Brassicaceae	*Hirschfeldia incana*	Short-podded Mustard**
Brassicaceae	*Lepidium fremontii*	Desert Pepperweed
Brassicaceae	*Lepidium latifolium*	Perennial Pepperweed**
Brassicaceae	*Lepidium perfoliatum*	Shield Cress, Clasping Pepperweed*
Brassicaceae	*Nasturtium officinale*	Watercress
Brassicaceae	*Sisymbrium altissimum*	Tumble Mustard*
Brassicaceae	*Stanleya pinnata*	Prince's Plume
Brassicaceae	*Thysanocarpus curvipes*	Fringe Pod
Brassicaceae	*Tropidocarpum gracile*	Dobie Pod, Slender Keep Fruit
Cactaceae	*Cylindropuntia californica*	California Cholla
Cactaceae	*Opuntia basilaris*	Beavertail Cactus
Cactaceae	*Opuntia phaecantha*	Brown-spined Prickly Pear
Campanulaceae	*Nemacladus secundiflorus var. robbinsii*	Robbins' Nemacladus
Caprifoliaceae	*Lonicera subspicata var. denudata*	Johnston's Honeysuckle
Chenopodiaceae	*Atriplex canescens*	Fourwing Saltbush

Chenopodiaceae	*Atriplex lentiformis*	Big Saltbush
Chenopodiaceae	*Bassia hyssopifolia*	Five Horn Bassia**
Chenopodiaceae	*Chenopodium californicum*	California Goosefoot
Chenopodiaceae	*Krascheninnikovia lanata*	Winter Fat
Chenopodiaceae	*Salsola paulsenii*	Barbwire Russian Thistle**
Cleomaceae	*Peritoma arborea*	Bladderpod
Convolvulaceae	*Calystegia occidentalis ssp. fulcrata*	Sonora Morning Glory
Convolvulaceae	*Convolvulus arvensis*	Bindweed*
Convolvulaceae	*Cuscuta californica*	California Dodder
Convulvulaceae	*Calystegia collina ssp. venusta*	So. Coast Range Morning Glory (4.3)
Crassulaceae	*Dudleya lanceolata*	Lance-leaved Liveforever
Cucurbitaceae	*Cucurbita foetidissima*	Buffalo Gourd
Cucurbitaceae	*Marah horrida*	Sierra Man-root
Cucurbitaceae	*Marah macrocarpa*	Chilicothe
Cupressaceae	*Hesperocyparis nevadensis*	Piute Cypress
Cupressaceae	*Juniperus californica*	California Juniper
Cyperaceae	*Carex simulata*	Short-beaked Sedge
Ephedraceae	*Ephedra viridis*	Green Ephedra
Equisetaceae	*Equisetum sp.*	Horsetail
Ericaceae	*Arctostaphylos glauca*	Big Berry Manzanita
Ericaceae	*Arctostaphylos parryana*	Parry Manzanita
Euphorbiaceae	*Croton setiger*	Turkey-mullein, Dove Weed
Euphorbiaceae	*Euphorbia albomarginata*	Whitemargin Sandmat
Fabaceae	*Acmispon brachycarpus*	Short-podded Lotus
Fabaceae	*Acmispon glaber*	Deerweed
Fabaceae	*Acmispon procumbens*	Silky Cal. Broom
Fabaceae	*Acmispon strigosus*	Strigose Lotus
Fabaceae	*Astragalus douglasii*	Douglas' Milkvetch
Fabaceae	*Astragalus gambelianus*	Gambel's milkvetch
Fabaceae	*Astragalus pachypus*	Thickpod Milkvetch
Fabaceae	*Astragalus purshii*	Pursh’s Milkvetch
Fabaceae	*Astragalus trichopodus*	Santa barbara milkvetch
Fabaceae	*Lathyrus vestitus*	Pacific Pea
Fabaceae	*Lotus corniculatus*	Bird's Foot Lotus*
Fabaceae	*Lupinus benthamii*	Bentham Lupine
Fabaceae	*Lupinus bicolor*	Miniature Lupine
Fabaceae	*Lupinus concinnus*	Bajada Lupine
Fabaceae	*Lupinus excubitus*	Grape Soda Lupine
Fabaceae	*Lupinus microcarpus var. densiflorus*	Chick lupine

Fabaceae	*Melilotus sp.*	Sweetclover*
Fabaceae	*Trifolium albopurpureum*	Rancheria Clover
Fabaceae	*Trifolium gracilentum*	Pin Point Clover
Fabaceae	*Trifolium willdenovii*	Tomcat Clover
Fabaceae	*Vicia americana*	American Vetch
Fagaceae	*Quercus chrysolepis*	Canyon Live Oak
Fagaceae	*Quercus john-tuckeri*	Tucker's Oak
Fagaceae	*Quercus lobata*	Valley Oak
Garryaceae	*Garrya flavescens*	Ashy Silk Tassel
Geraniaceae	*Erodium cicutarium*	Filaree**
Grossulariaceae	*Ribes divaricatum*	Spreading Gooseberry
Grossulariaceae	*Ribes malvaceum*	Chaparral Currant
Grossulariaceae	*Ribes quercetorum*	Oak Gooseberry
Juncaceae	*Juncus balticus*	Baltic Rush
Juncaceae	*Juncus xiphioides*	Irisleaf Rush
Lamiaceae	*Marrubium vulgare*	White Horehound**
Lamiaceae	*Melissa officinalis*	Bee Balm*
Lamiaceae	*Monardella breweri*	Mustang Mint
Lamiaceae	*Salvia apiana*	White Sage
Lamiaceae	*Salvia carduacea*	Thistle Sage
Lamiaceae	*Salvia columbariae*	Chia Sage
Lamiaceae	*Salvia dorrii*	Purple Sage, Dorr's Sage
Lamiaceae	*Salvia mellifera*	Black Sage
Lauraceae	*Umbellularia californica*	California Bay Laurel
Liliaceae	*Bloomeria crocea*	Golden Stars
Liliaceae	*Calochortus clavatus*	Clubhair Mariposa Lily
Liliaceae	*Calochortus kennedyi*	Desert Mariposa Lily
Liliaceae	*Calochortus palmeri*	Palmer's Mariposa Lily
Liliaceae	*Calochortus striatus*	Alkali Mariposa Lily
Liliaceae	*Calochortus venustus*	Butterfly Mariposa Lily
Loasaceae	*Mentzelia albicaulis*	Whitestem Blazing Star, Whitestem stickleaf
Loasaceae	*Mentzelia veatchiana*	Veatch's Blazingstar
Malvaceae	*Fremontodendron californicum*	Flannel Bush
Malvaceae	*Malacothamnus fremontii*	Fremont's Bush Mallow
Malvaceae	*Malacothamnus orbiculatus*	Tehachapi Bush Mallow, Round-leaved b
Malvaceae	*Sphaeralcea ambigua*	Desert Mallow, Apricot Mallow
Montiaceae	*Calandrinia menziesii*	Redmaids
Montiaceae	*Calyptridium monandrum*	Common Pussypaws
Montiaceae	*Claytonia exigua*	Little Spring Beauty

Montiaceae	*Claytonia parviflora*	Narrow-leaved Miner's Lettuce
Montiaceae	*Claytonia perfoliata*	Miner's Lettuce
Nyctaginaceae	*Mirabilis laevis*	Desert Wishbone Bush
Onagraceae	*Camissonia campestris*	Mojave Suncup
Onagraceae	*Camissonia strigulosa*	Strigose Sun Cup
Onagraceae	*Camissoniopsis ignota*	Jurupa Hills Sun Cup
Onagraceae	*Clarkia cylindrica*	Speckled Clarkia
Onagraceae	*Clarkia purpurea*	Winecup Clarkia
Onagraceae	*Epilobium canum*	California Fuschia
Onagraceae	*Eremothera boothii*	Booth's Evening Primrose
Onagraceae	*Eulobus californicus*	California Primrose
Onagraceae	*Oenothera californica*	California Evening Primrose
Onagraceae	*Oenothera deltoides*	Dune Primrose
Onagraceae	*Oenothera elata*	Hooker's Evening Primrose
Onagraceae	*Oenothera primiveris*	Yellow Desert Evening Primrose
Onagraceae	*Tetrapteron palmeri*	Palmer's Sun Cup
Orchidaceae	*Epipactis gigantea*	Stream Orchid
Orobanchaceae	*Castilleja chromosa*	Desert Indian Paintbrush
Orobanchaceae	*Castilleja exserta*	Owl's Clover
Orobanchaceae	*Castilleja foliolosa*	Wooly Indian Paintbrush
Orobanchaceae	*Castilleja subinclusa var. jepsonii*	Longleaf Paintbrush
Orobanchaceae	*Cordylanthus rigidus*	Rigid Bird’s Beak
Papaveraceae	*Argemone munita*	Prickly Poppy
Papaveraceae	*Eschscholzia californica*	California Poppy
Papaveraceae	*Eschscholzia minutiflora*	Pygmy Gold Poppy
Papaveraceae	*Platystemon californicus*	Cream Cups
Phrymaceae	*Erythranthe guttata*	Yellow Monkey Flower
Pinaceae	*Pinus monophylla*	Single-leaf Pinyon Pine
Plantaginaceae	*Collinsia bartsiifolia*	White collinsia
Plantaginaceae	*Keckiella ternata*	Blue-stemmed Keckiella
Plantaginaceae	*Linaria dalmatica ssp. dalmatica*	Dalmation Toadflax**
Plantaginaceae	*Penstemon centranthifolius*	Scarlet Bugler
Plantaginaceae	*Penstemon grinnellii*	Grinnell's Beardtongue
Plantanaceae	*Platanus racemosa*	California Sycamore
Poaceae	*Arundo donax*	Giant Reed**
Poaceae	*Avena barbata*	Slender Wild Oat**
Poaceae	*Avena fatua*	Wild Oat**
Poaceae	*Bromus carinatus*	California Brome Grass
Poaceae	*Bromus diandrus*	Ripgut Brome**

Poaceae	*Bromus hordeaceus*	Soft Chess**
Poaceae	*Bromus madritensis*	Foxtail Brome**
Poaceae	*Bromus rubens*	Red Brome*
Poaceae	*Bromus tectorum*	Cheat Grass**
Poaceae	*Cortaderia jubata*	Pampas Grass**
Poaceae	*Elymus condensatus*	Giant Rye Grass
Poaceae	*Elymus elymoides*	Big Squirreltail
Poaceae	*Elymus trachycaulus*	Slender Wheatgrass
Poaceae	*Elymus triticoides*	Creeping Wild Rye
Poaceae	*Festuca myuros*	Rat Tail Fescue**
Poaceae	Hordeum brachyantherum	Meadow barley
Poaceae	*Hordeum murinum ssp.leporinum*	Foxtail Barley*
Poaceae	*Melica imperfecta*	Small-flowered Melic
Poaceae	*Muhlenbergia rigens*	Deergrass
Poaceae	*Poa annua*	Annual Bluegrass*
Poaceae	*Poa secunda*	Pine Bluegrass
Poaceae	*Schismus barbatus*	Old Han Schismus**
Poaceae	Secale cereale	Cereal rye*
Poaceae	*Stipa cernua*	Nodding Needle Grass
Poaceae	*Stipa hymenoides*	Indian Rice Grass
Poaceae	*Stipa pulchra*	Purple Needle Grass
Poaceae	*Stipa speciosa*	Desert Needle Grass
Polemoniacea	*Allophyllum glutinosum*	Sticky False Gilia
Polemoniaceae	*Eriastrum densifolium*	Giant Woollystar
Polemoniaceae	*Eriastrum diffusum*	Miniature Woollystar
Polemoniaceae	*Gilia brecciarum*	Nevada Gilia
Polemoniaceae	*Gilia capitata*	Globe Gilia
Polemoniaceae	*Gilia latiflora*	Broad Flowered Gilia
Polemoniaceae	*Gilia transmontana*	Transmontane Gilia
Polemoniaceae	*Langliosia setosissima*	Bristly langloisia
Polemoniaceae	*Leptosiphon aureus*	Golden Linanthus
Polemoniaceae	*Leptosiphon brevicaulus*	Mojave Linanthus
Polemoniaceae	*Leptosiphon parviflorus*	Variable linanthus
Polemoniaceae	*Linanthus bigelovii*	Bigelow's Linanthus
Polemoniaceae	*Linanthus californicus*	California Prickly Phlox
Polemoniaceae	*Linanthus dichotomous*	Evening Snow
Polemoniaceae	*Linanthus parryae*	Parry's Linanthus
Polemoniaceae	*Loeseliastrum schottii*	Schott's calico
Polemoniaceae	*Microsteris gracilis*	Slender Phlox

Polyganaceae	*Centrostegia thurberi*	Red Triangles
Polygonaceae	*Chorizanthe brevicornu*	Brittle spineflower
Polygonaceae	*Chorizanthe parryi*	Parry's Spineflower
Polygonaceae	*Chorizanthe staticoides*	Turkish Rugging
Polygonaceae	*Eriogonum angulosum*	Angle-stemmed Buckwheat
Polygonaceae	*Eriogonum elongatum*	Longstem buckwheat
Polygonaceae	*Eriogonum fasciculatum*	California Buckwheat
Polygonaceae	*Eriogonum fasciculatum var. polifolium*	Eastern Mojave Buckwheat
Polygonaceae	*Eriogonum inflatum*	Desert Trumpet
Polygonaceae	*Eriogonum nudum*	Nude Buckwheat
Polygonaceae	*Eriogonum pusillum*	Yellow Turban
Polygonaceae	*Eriogonum roseum*	Wand Buckwheat
Polygonaceae	*Mucronea perfoliata*	Desert saucers
Polygonaceae	*Pterostegia drymarioides*	Fairy Mist
Polygonaceae	*Rumex hymenosepalus*	Wild Rhubarb, Canaigre
Ranunculaceae	*Delphinium gypsophilum*	Gypsum-loving Larkspur
Ranunculaceae	*Delphinium parryi ssp. purpureum*	Mt. Pinos Larkspur
Rhamnaceae	*Ceanothus cueatus*	Buckbrush
Rhamnaceae	*Ceanothus leucodermis*	Chaparral whitethorn
Rhamnaceae	*Ceanothus pauciflorus*	Mojave Ceanothus
Rhamnaceae	*Frangula californica*	Coffeeberry
Rhamnaceae	*Rhamnus ilicifolia*	Hollyleaf Redberry
Rosaceae	*Adenostoma fasciculatum*	Chamise
Rosaceae	*Cercocarpus betuloides*	Birchleaf Mountain Mahogany
Rosaceae	*Potentilla sp.*	Cinquefoil
Rosaceae	*Prunus ilicifolia*	Hollyleaf Cherry
Rosaceae	*Purshia stansburryana*	Stansbury's Cliffrose
Rosaceae	*Purshia tridentata*	Bitterbrush
Rosaceae	*Rosa californica*	California Wild Rose
Rubiaceae	*Galium andrewsii*	Phlox Leaved Bedstraw
Rubiaceae	*Galium sp.*	Bedstraw
Salicaceae	*Populus fremontii*	Fremont Cottonwood
Salicaceae	*Salix gooddingii*	Black Willow
Salicaceae	*Salix laevigata*	Red Willow
Salicaceae	*Salix lasiandra*	Shining Willow
Salicaceae	*Salix lasiolepis*	Arroyo Willow
Salicaceae	*Salix scouleriana*	Scouler's willow
Saururaceae	*Anemopsis californica*	Yerba Mansa
Solanaceae	*Datura wrightii*	Jimson Weed

Solanaceae	*Lycium cooperi*	Peach Thorn
Solanaceae	*Solanum xanti*	Purple Nightshade
Themidaceae	*Diptospermum capitatus*	Blue Dicks, Blue Hyacinth
Themidaceae	*Muilla maritima*	Sea Muilla
Typhaceae	*Typha sp.*	Cattail
Urticaceae	*Urtica dioica ssp. holosericea*	Stinging Nettle
Violaceae	*Viola pedunculata*	Johnny Jump Up
Viscaceae	*Phoradendron villosum*	Pacific Mistletoe

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 UTMs 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 overlap[1] 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 overlap[1] 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 overlap[1] of individual trees.
Regen Tree: The total foliar cover of seedlings and saplings, disregarding overlap[1] 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 overlap[1] 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 overlap[1] 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 overlap[1] 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?** ☐
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:	**Base / Projected** (circle one) Record either UTMs or Decimal Degrees GPS error: **ft./ m./ PDOP** _____
	UTMs: UTME ___ ___ ___ ___ ___ ___ **UTMN** ___ ___ ___ ___ ___ ___ ___
	Decimal degrees: **LAT** ___ ___ . ___ ___ ___ ___ ___ ___ **LONG** - ___ ___ ___ . ___ ___ ___ ___ ___ ___
Stand Size: <1 1–5 >5	**Camera:** **Photos:** **View Radius** _____
Exposure, Actual °: _____ **NE NW SE SW Flat Variable | Steepness, Actual °:** _____ **0° 1-5° > 5-25° > 25**	
Field Alliance name:	
Comments:	

% Cover: Conifer____ Hardwood____ Total Tree____ Regen Tree____ Shrub____ Herb____ Total Veg____ Exotics (L,M,H) ____

Strata	Species	% cover		Strata	Species	% cover		Strata	Species	% cover