Wildlife Habitat Protection Plan

Eastern Kern County Onyx Ranch State Vehicular Recreation Area

2025

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List of Abbreviations

Abbreviation	Definition
ARU	Acoustic Recording Unit
ARSSC	amphibian and reptile species of special concern
ATV	All-Terrain Vehicle
ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
BMP	Best Management Practice
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CDPR	California Department of Parks and Recreation
CSP	California State Parks
DRECP	Desert Renewable Energy Conservation Plan
EDRR	Early Detection and Rapid Response
EIR	Environmental Impact Report
GIS	Geographic Information System
GPS	Global Positioning System
GRTS	generalized random tessellation stratified
HMS	Habitat Monitoring System
IBP	Institute for Bird Populations
IUCN	International Union for Conservation of Nature
LADWP	Los Angeles Department of Water and Power
LUPA	Land Use Plan Amendments
MGS	Mohave Ground Squirrel

Abbreviation	Definition
MU	Management Unit
NAIP	National Agriculture Imagery Program
NOAA	National Oceanic and Atmospheric Administration
NRD	Natural Resources Division
NVCS	National Vegetation Classification Standard
OHMVRD	Off-Highway Motor Vehicle Recreation Division
OHV	Off-Highway Vehicle
PCT	Pacific Crest Trail
PRC	Public Resources Code
RCA	Rudnick Common Allotment
ROV	Recreational Off-Highway Vehicle
ROW	Right of Way
SB	Senate Bill
SCP	Soil Conservation Plan
SSC	Species of Special Concern
SVRA	State Vehicular Recreation Area
SWAP	State Wildlife Action Plan
TAG	Technical Advisory Group
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VegCAMP	Vegetation Classification and Mapping Program
WHPP	Wildlife Habitat Protection Plan
WMA	Weed Management Area

1 Introduction

1.1 Purpose and Scope of 2025 Wildlife Habitat Protection Plan

The goal of the 2025 Eastern Kern County Onyx Ranch (Onyx) State Vehicular Recreation Area (Onyx SVRA, the Park) Wildlife Habitat Protection Plan (WHPP) is to present the full picture of an SVRA's wildlife and habitat management effort and is to act as a dynamic working document that provides land managers with guidance for the management of habitat, along with short- and long-term habitat goals and the methods to achieve these goals. Each WHPP utilizes scientific literature, expert opinion, and staff expertise in setting goals and describing land management activities. The scope of a WHPP encompasses the full spectrum of land management and visitor use activities that affect wildlife habitat at an SVRA. It includes existing settings, goals and objectives, management actions, and a plan for why and when management actions are implemented, among other items.

1.2 Legal and Operational Requirements

Since 1988, California Public Resources Code (PRC) has required a WHPP that focuses on sustaining a viable species composition for each SVRA. In 2017, Senate Bill 249 (SB 249) amended the PRC requiring a WHPP that conserves and improves wildlife habitats be developed for each SVRA. SB 249 added other specific WHPP requirements, including considering statutorily required state and regional conservation objectives, applying best available science, and including the annual monitoring undertaken at each SVRA to ensure WHPP objectives are being met. Specific excerpts from PRC relating to the WHPPs can be found in Section 14 Appendix 5.

1.3 Relationship with other SVRA Plans

The WHPP is a management plan that was developed with consideration of other planning documents, either directly or indirectly, relating to Onyx SVRA (Figure 1). Onyx SVRA does not currently have an approved General Plan. Once a General Plan is completed, the WHPP will be amended, if needed, to be consistent with the General Plan. The Soil Conservation Plan (SCP) should be finalized in 2025 and will guide the Park's management of trails with regards to soil conservation. The Cultural Resource Management Plan informs the Park's management of cultural resources (Far Western, 2016).

Figure 1. State Parks' Park Planning Structure.

1.4 California Environmental Quality Act (CEQA) Compliance

The overall purpose of this WHPP is to present a full picture of the SVRA's natural resources and resource monitoring programs. As a part of this process, the WHPP also identifies resource objectives and general types of projects and/or actions that can or will be taken to ensure progress on meeting the WHPP objectives. The CEQA process (not necessarily the product) begins at this stage. If discretionary projects or actions are identified, California Department of Parks and Recreation (CDPR) will follow CDPR procedure for meeting CEQA compliance. Once a project or action has been selected for implementation, it will undergo CEQA review at that time using the CDPR Project Evaluation Form.

1.5 Update Cycle and Approval Process

This WHPP will be evaluated at least once every five years. Each revision will encompass wildlife habitat protection and restoration planning in the SVRA over the next five years. Updates will include a summary of wildlife habitat protection and conservation at the SVRA since the previous WHPP revision and a description of the goals and objectives for the next five years. The update will reflect changes to landcover, land use, species occurrence, and disturbance, as well as land acquisitions and updates to monitoring protocols or technology.

Once completed, an updated WHPP will be approved by the Great Basin District Natural Resources Program Manager and District Superintendent. Following internal reviews with CDPR,

the WHPP will be made available for public review, will be submitted to the Natural Resource Division (NRD) for Best Available Science determination, and finally submitted to the Off-Highway Motor Vehicle Recreation Division (OHMVRD) for review and approval. If a CEQA review is deemed necessary, it will be completed at that time. If any significant alterations are made to this 2025 WHPP or within a five-year update, public review and best available science determination will be completed again.

1.6 Adaptive Management Strategy

Adaptive management is an integral component of the WHPP and a strategy of implementing best available science. Adaptive management includes assessing natural resource conditions, developing objectives based on those conditions, identifying management actions, and monitoring these actions, which allows evaluation and adjustment of practices (Figure 2). Each step of the adaptive management strategy is included in the following Sections 2 through 6.

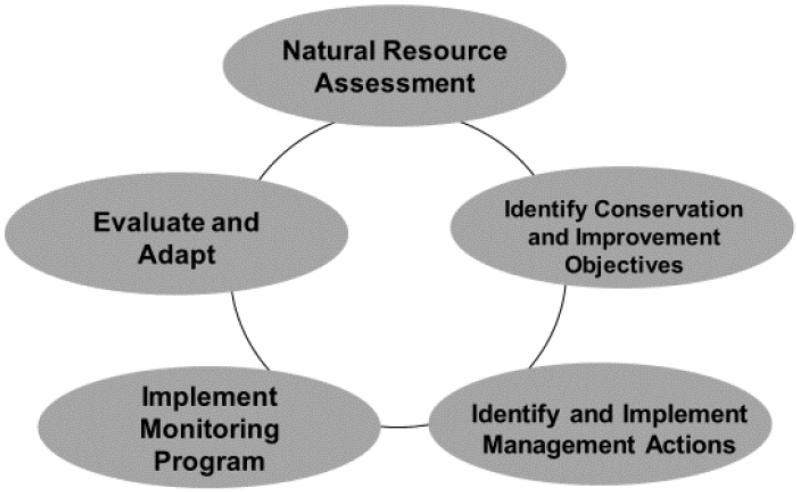


Figure 2. Steps of the Adaptive Management Strategy (CDPR 2021)

2 SVRA Setting and Natural Resource Assessments

The following chapter provides information on Onyx SVRA's setting and natural resource assessments. The setting and natural resource assessments are used to understand important conservation issues within the Park. Additionally, this information provides the basis or baseline for applying adaptive management. The following sections include an overview of park history and setting characteristics, regional context and land use, PRC required wildlife and native plant inventories, invasive species distribution, and details regarding sensitive resources and wildlife movement, including landscape connectivity.

2.1 Park Overview

2.1.1 Location

Onyx SVRA is a 26,403-acre off-highway vehicle (OHV) recreation area managed by CDPR and located in Eastern Kern County, where the Mohave Desert meets the southern end of the Sierra Nevada mountain range (Figure 3). Onyx SVRA acreage consists mostly of one-square mile parcels distributed in a checkerboard pattern, intermixed with land managed by the United States Bureau of Land Management (BLM). Boundary markers along designated routes distinguish when visitors are entering BLM land or State Park land. Most of the BLM land is also managed as an OHV recreation area. The Park is approximately 40 miles southwest of Ridgecrest, California and 21 miles northeast of Mojave, California. The main access to Onyx SVRA is via Jawbone Canyon Road off State Route 14. Within the park boundaries, there are approximately 21 miles of CDPR-managed trails, all of which are accessible by 4x4 vehicles. The Pacific Crest Trail (PCT) crosses a northwestern parcel of Onyx SVRA. Adjacent land use includes a wind farm to the southwest, Red Rock Canyon State Park to the northeast, and cattle grazing to the west. In addition to BLM land, some private parcels are owned within the checkerboard land ownership pattern that includes Onyx SVRA (Figure 4).

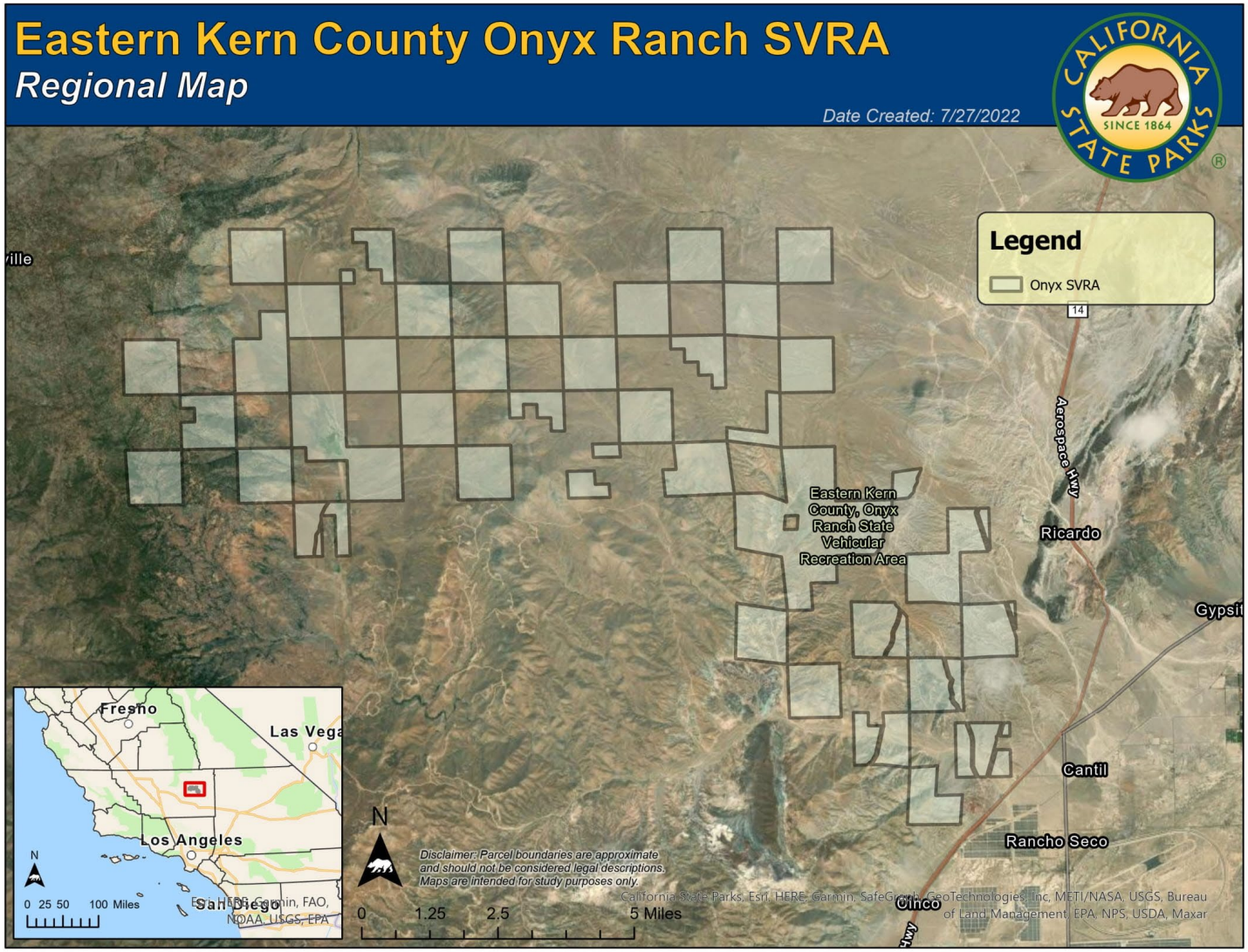


Figure 3. Location of the Park.

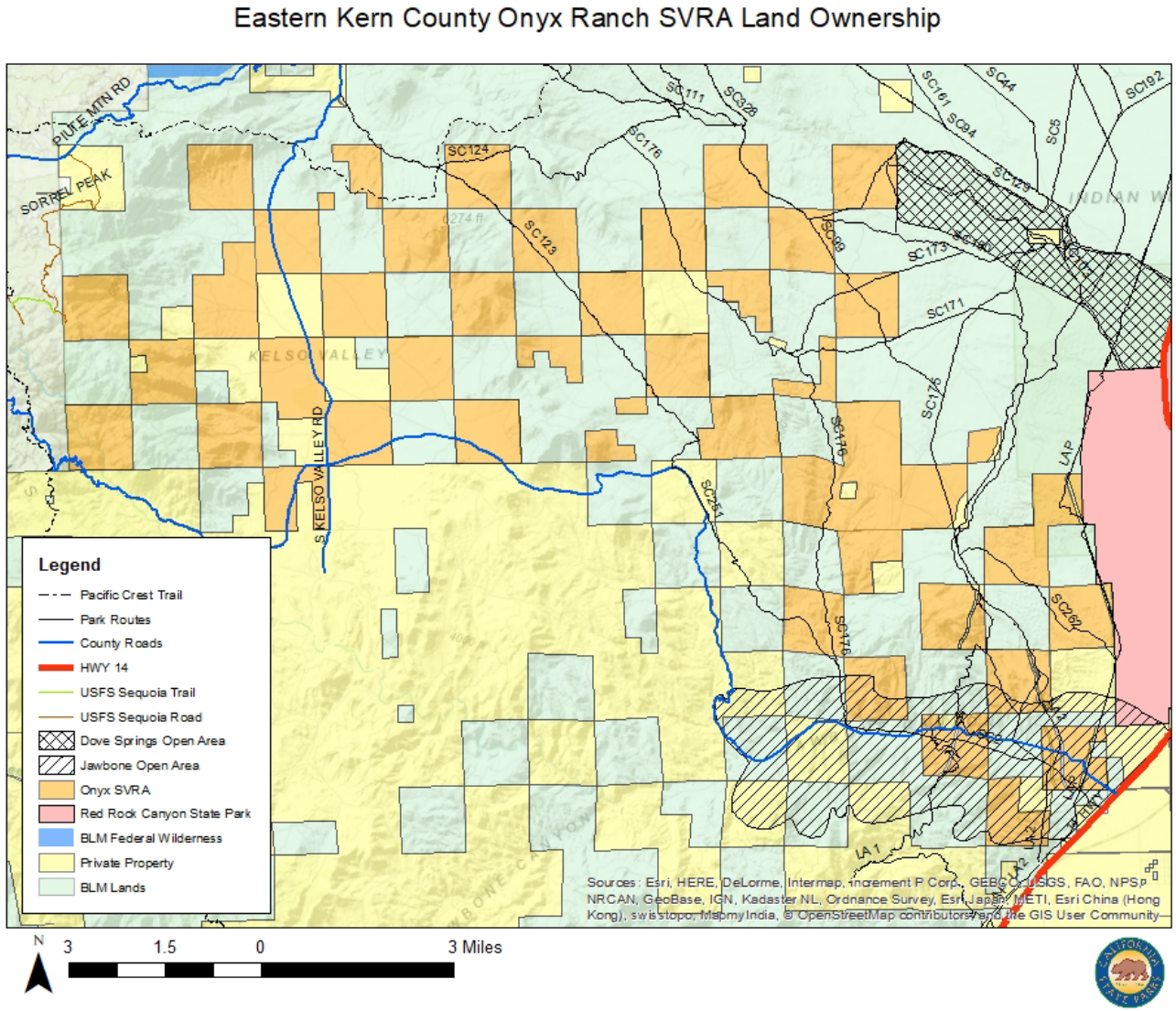


Figure 4. Map of various land ownership and management entities in and around Onyx SVRA.

2.1.2 History

Acquisition

Onyx SVRA parcels were purchased from ReNu Resources (a renewable energy/wind limited liability company) in 2014. The land was acquired with existing OHV use that was not formally approved by ReNu but was adjacent to areas with BLM OHV use. OHV use continued within the Park after the acquisition.

Native American Land Use

Prehistoric use of Onyx SVRA and the surrounding areas date back 14,000 years and is within the ethnographic territory of the Nïwï or Kawaiisu people. During the Park's acquisition, a systematic survey found many cultural resources that need to be considered during project planning and WHPP implementation to prevent adverse impacts. These resources and management actions are discussed in the Park's Cultural Resource Management Plan, which was created after the Park's acquisition. This plan aims at preserving the existing cultural resources throughout the park and lists protective measures and monitoring. Protective measures include public education, signage, and fencing (Far Western 2016).

Mining

Mining for gold and pumicite occurred in the area from the late nineteenth century to early twentieth century. No mines within park boundaries are still operating and the Park is currently working with the California Department of Conservation, Division of Mine Reclamation, Abandoned Mines Land Unit on remediating potential hazards of the mines. A 2018 inventory by the Abandoned Mines Land Unit found 45 mine features within Park boundaries. Nine of those were given a hazardous rating and may require closure (CDPR 2018). As of 2023, a project is in review to install bat gates, tortoise fencing, and culvert gates at the hazardous mines.

Ranching and Homesteading

Cattle grazing in Kern County started in the 1840s, as entrepreneurs came to mining towns and established businesses to supply the miners with food and provisions (CDPR 2015b). The original Mack Meadow Ranch in Kelso Valley dates back to 1864 and the Mack Meadow Ranch cabin, built in 1920, and nearby ranch-related buildings and structures are still standing within the Park (CDPR 2015b). More information on cattle grazing within the Park can be found in Section 2.1.4 Regional Land Use.

Wildfires

In 2006, the Cottonwood fire burned part of what is now the eastern parcels of Onyx SVRA, near Sorrel Peak. The cause of the fire is unknown but burn scars are still evident in this area. In

December of 2017, there was a 1.5-acre fire at Butterbredt Spring caused by a campfire in a non-designated location. The fire burned the underbrush and cattails in the spring area. Only one cottonwood tree was felled for firefighter safety, but several cottonwood trees died as a result of the fire. Many of these dead trees have fallen over since 2017, but a few snags remain standing.

2.1.3 General Environmental Characteristics

Climate

The Park follows the arid-Mediterranean climate pattern of cold and wet winters with hot and dry summers. From 1991 to 2020 in Mojave, California, mean maximum temperatures ranged from 56.5-97.2 degrees Fahrenheit and mean minimum temperatures ranged from 31.8-69.1 degrees Fahrenheit (National Oceanic and Atmospheric Administration [NOAA 2024]). For those same years, average annual precipitation was 5.76 inches (NOAA 2024). The majority of rainfall occurs from October to April, but heavy summer storms do take place, causing flash floods.

Hydrology

Onyx SVRA is within two hydrologic regions including the Tulare Lake Hydrologic Region and the South Lahontan Hydrologic Region (Figure 5). Intense summer storms can cause flash flooding in ephemeral streams and drainages. The three perennial streams in the area include Caliente Creek, Cottonwood Creek, and Landers Creek. Additionally, there are several springs in Onyx SVRA and surrounding area including Butterbredt Spring, Alphie Spring, Dove Spring, Green Spring, and Quail Spring. Kelso Valley consists of a wetland complex made up of several different wetlands. This low-lying area is the intersection of several different drainages resulting in separate wet meadows, marshes, and seeps.

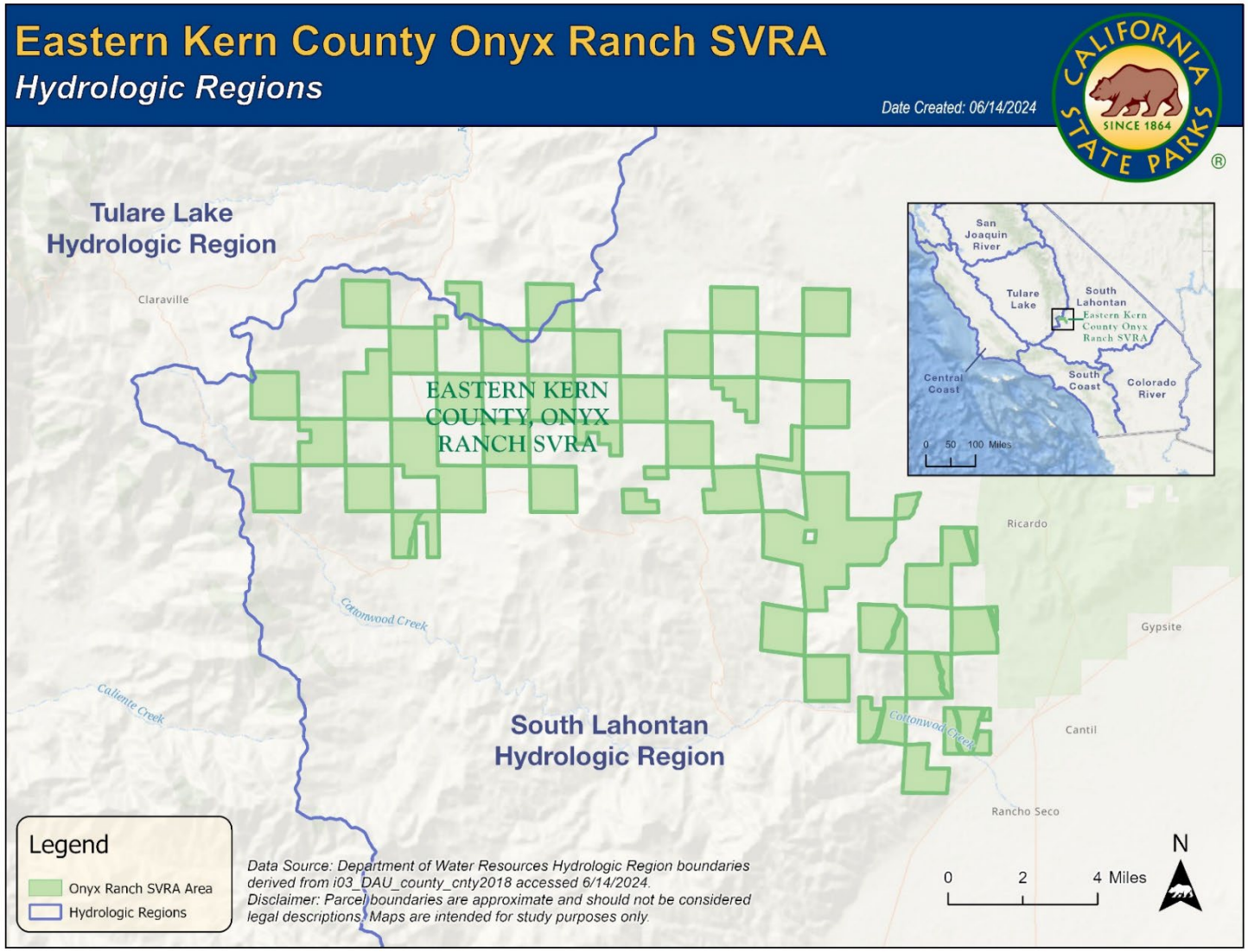


Figure 5. Map of the hydrologic regions within Onyx SVRA.

Topography

The SVRA is located adjacent to the southern edge of the Sierra Nevada Mountain Range and is in the Mohave Basin. Elevations in the SVRA range from approximately 2,150 to 7,500 feet. Slopes vary from gentle to steep. The Park is characterized by isolated rock mounds and boulders.

Geology

Onyx SVRA is located in the Basin and Range geomorphic Province east of the Sierra Nevada Geomorphic Province. The Mojave Desert Geomorphic Province is situated to the south of the Park, separated by the active, east-west trending, left-lateral Garlock Fault. Rocks and features from the adjacent geomorphic provinces can be found in Onyx SVRA. The area is characterized by subparallel, north-south trending fault-bounded mountain ranges and elevated basins that have resulted from extensional processes over the past 40 million years. Major faults that run through Onyx SVRA include the northwest-southeast trending, right-lateral San Andreas Fault and the north-southwest trending, high angle normal Sierra Nevada fault. Fault activity can cause fault rupture, geologic hazards, shaking, and liquefaction.

2.1.4 Regional Land Use

Bureau of Land Management

The BLM operates federally managed land throughout the Mojave Desert and specifically in and around Onyx SVRA. OHV use on these lands has occurred for over 30 years and the Friends of Jawbone was formed in 1998 to improve, protect, and maintain existing trails along with education and cooperation of users of public lands.

Onyx SVRA overlaps the BLM designated Jawbone-Butterbredt Area of Environmental Concern (ACEC) as well as the California Desert Conservation Area (CDCA). The ACEC was established to manage and protect cultural and wildlife values between the mountains and the northwestern Mojave Desert and comprises of 187,486 acres of land (CDPR 2013).

Open Areas

Jawbone Canyon Open Area is over 8,500 acres of mostly BLM land, but there are 3,064 acres of parcels managed by Onyx SVRA. Additionally, Dove Springs Open Area is approximately 3,600 acres of mostly BLM land, with a very small overlap with the northeast parcel of Onyx SVRA. In areas where park parcels fall within or overlap with the BLM designated Open Areas, the state parcels maintain the designated use standards of the Open Areas. Signs marking the end of the Open Area boundaries as well as fencing are in place to distinguish the Open Areas where riding is unrestricted from the trail only areas. While individual parcels within the Open Areas are not

fenced, the boundaries of the Open Areas are mostly fenced. Fencing is not continuous in locations where the terrain acts as a natural barrier and limits OHV activity. A combination of BLM rangers and State Park Peace Officers enforce the regulations in and around Onyx SVRA and Jawbone and Dove Springs Open Areas, including enforcing regulations to keep OHV users in designated areas and trails.

Pipelines and Powerlines

Los Angeles Department of Water and Power (LADWP) has two aqueduct pipelines, as part of the Los Angeles Aqueduct system, and overhead transmission lines crossing the Park and surrounding areas. Their Right-of-Ways (ROW) are parceled-out pieces of land approximately 200 feet in width managed by LADWP that cut through a few of the southern Onyx SVRA parcels in the Jawbone Canyon area (see Figure 6). LADWP manages the maintenance of the roads that access their ROWs. These routes include LAP, LA-1 and LA-2. Operations of the water pipelines and transmission line do not directly impact Onyx SVRA.

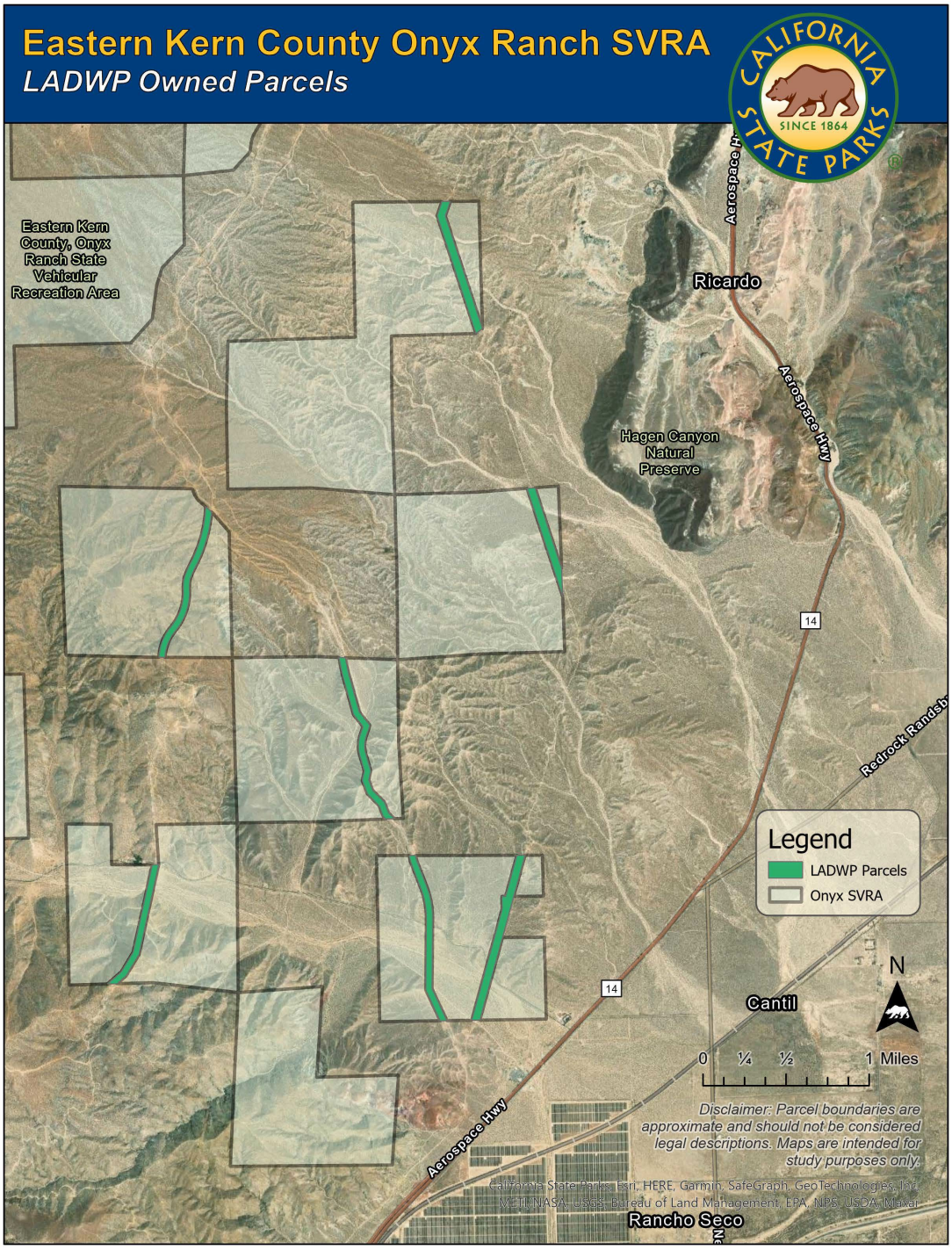


Figure 6. Aerial map showing Onyx SVRA parcels adjacent to LADWP parcels.

Cattle Grazing

At the time of the Park's acquisition, cattle grazing had occurred regularly since 1864 on the property (CDPR 2015b). Grazing occurred on a landscape level in sensitive desert ecosystems,

including a regionally rare aquatic feature (wetlands in Kelso Valley). The grazing occurred under grazing permits issued by BLM and a sub-leasing agreement with ReNu. Historically ReNu and BLM maintained a grazing lease with the livestock company, Hafenfeld Ranch LLC. In 2016, the Park entered a Prescriptive Grazing Lease with Hafenfeld Ranch for approximately 25,000 acres (CDPR 2015a). This lease was executed on Feb 1, 2016, and expired on February 28, 2018. Under the leases with BLM and CDPR, Hafenfeld continued to access, graze, and maintain grazing infrastructure within the newly acquired park.

In 2020, the majority of the BLM's Rudnick Common Allotment (RCA) was relinquished as mitigation for a renewable energy project. Several pastures made up the RCA, but the ones within Onyx SVRA include Kelso Valley Pasture, Dove Spring/Jawbone Canyon Pasture, and Sheep Troughs Pasture. Of the 242,000 acres that comprised the RCA, 215,000 acres were relinquished for mitigation, including all of the pastures in Onyx SVRA. The removal of cattle in the RCA will benefit desert tortoises and Mojave ground squirrels, among other wildlife, by reducing competition for forage and the risk of trampling of individuals and burrows (BLM 2020). Low intensity rest-rotation grazing continues in the Park on a month-to-month basis through the Onyx Ranch SVRA Grazing Lease's Holdover Clause. While the base of operations for cattle grazing in the Park is in Kelso Valley, grazing can occur in other areas of the Park including areas with desert tortoise habitat. Grazing in desert tortoise habitat may increase competition for forage and has the risk trampling individuals and crushing burrows (BLM 2020).

The Acquisition EIR states that CDPR would use the terms of the BLM permit as a baseline for management and protections of sensitive resources. Specifically, the EIR called for the Park to monitor and implement the same standards used by the BLM, including Rangeland Health Studies that address riparian areas. While previous Rangeland Health Studies in the area on adjacent BLM land are not well documented, surveys in Onyx SVRA are planned to begin in 2025. Monitoring and adaptive management is needed because over grazing can reduce habitat quality through vegetation loss and trampling, soil disturbance and compaction, streambed alteration, and increased erosion (CDPR 2013, Boarman 2002).

The majority of the grazing at Onyx SVRA occurs in Kelso Valley where there are annual grassland, wet meadow, and sagebrush habitat. In Kelso Valley, cattle grazing has controlled broad-leaved cattails and maintained a balance of open water in a stock pond, benefiting species such as the tri-colored blackbirds. Rangeland Health Studies and implementation of the BLM standards will safeguard habitat in the Park during the grazing lease. More information on the Rangeland Health Assessments and Forage Utilization Surveys can be found in Section 6.1 and Section 12 Appendix 3.

The grazing lease allows for a herd composed of between 180 and 300 adult cattle, with an average herd size of 240. This number does not include the number of calves produced by the

herd as they are weaned and processed within 6 months. The herd size is reduced or increased based on vegetation conditions in the fall and projections of conditions in the spring. The herd is rotated throughout all three grazing pastures within Onyx SVRA annually. Each pasture receives a rotating spring rest period so that no pasture is grazed two springs in a row.

Hunting

Hunting is popular in the area, especially for chukar and quail, and permitted within the SVRA and surrounding BLM parcels (CDPR 2013).

2.1.5 Local County Ordinance

Kern County has an Estray Ordinance, established in 1942, which declares grazing allotments within Kern County as "Open Range" (Kern County, 2020). This means that landowners or managers within a grazing allotment, who want to exclude cattle from grazing their property, are responsible for installing fences to keep cattle out. Due to the relinquishment of the RCA on adjacent BLM lands for mitigation credits, cattle grazing must be carefully managed to avoid impacts to resources on these lands and maintain cooperative relations in good standing.

2.1.6 State and Regional Conservation Planning

Public Resources Code Section §5090.32(g) requires that WHPPs be developed in consideration of statutorily required state and regional conservation objectives (CDPR 2021). These state and regional conservation objectives are used purely for reference when developing Onyx SVRA's WHPP and are not intended to demonstrate compliance. Relevant state and regional conservation objectives were reviewed (Table 1 and Table 2) and incorporated into the development of the Onyx SVRA WHPP objectives.

Table 1 and Table 2. Summary of state and regional plans, their geographical relationship to Onyx SVRA, and whether the WHPP contributes to relevant state or regional conservation objectives.

Statewide Documents with Conservation Objectives

Document Name	***Geographical Overlap with the Park***	***Contains Relevant Target Resources***	***Contributes to Conservation Objectives***
State Wildlife Action Plan	X	X	X
Natural Resources Agency- Safeguarding California Plan: 2018 Update	X	X	X

Note: The state and regional plans are purely for reference purposes when developing the SVRA's WHPP and do not constitute the SVRA being subject to such plans or programs.

Regional Documents with Conservation Objectives

Document Name	***Geographical Overlap with the Park***	***Contains Relevant Target Resources***	***Contributes to Conservation Objectives***
Desert Renewable Energy Conservation Plan	X	X	X
Mohave Ground Squirrel Conservation Strategy	X	X	X
Mojave Desert Ecoregional Assessment	X	X	X
West Mojave Plan	X	X	X
West Mojave Route Network Project	X	X	X
Western Joshua Tree Conservation Plan	X	X	X

Note: The state and regional plans are purely for reference purposes when developing the SVRA's WHPP and do not constitute the SVRA being subject to such plans, programs, or incidental take permits/statements.

State Wildlife Action Plan (SWAP)

The State Wildlife Action Plan (SWAP), developed by CDFW in concert with several partners statewide, provides a blueprint for wildlife conservation and habitats in the context of a growing human population and a changing climate. One of the priority goals of the Plan is to maintain and improve ecological conditions vital for sustaining ecosystems in California by, in part, improving ecosystem connectivity and community structure. This 2025 WHPP supports these SWAP goals by conserving and improving wildlife habitat over time within the SVRA (CDFW 2022c). The SWAP has divided the state of California into seven provinces and developed regional conservation strategies for each. Onyx SVRA falls within both the Desert Province and the Central Valley and Sierra Nevada Province.

For the Desert Province, the Park falls within the Mojave Desert Ecoregion, with one identified conservation target, Shadescale-Saltbrush Scrub habitat, relevant to the Park. The eight goals listed for the Shadescale-Saltbush Scrub habitat for 2015-2025 include:

Increase acres of disturbed habitat showing signs of succession by at least 5%,
Increase acres of habitat by at least 5%,
Increase acres with endemic plant and animal diversity by at least 5%,
Increase acres of habitat that are dominated by native plants by at least 5%,
Increase acres with habitat connectivity by at least 5%,
Increase acres/miles with natural hydrologic regime by at least 5%,
Increase acres with suitable soil characteristics by at least 5%, and
Increase acres with desired stages of succession by at least 5%.

For the Central Valley and Sierra Nevada Province, the Park falls within the Sierra Nevada Ecoregion, with one identified conservation target, Wet Mountain Meadow; Western Upland Grasslands, relevant to the Park. The seven goals listed for the Wet Mountain Meadow; Western Upland Grasslands for 2015-2025 include:

Increase acres of meadows by 5%.
Increase populations of hydrophilic vegetation species by 5%.
Increase acres of habitat that are dominated by native plants by at least 5%,
Increase acres/miles with natural hydrologic regime by at least 5%,
Increase acres with desired fire regime by at least 5%,
Increase acres with reduced sediment input by at least 5%, and
Increase miles with desired level of discharge by at least 5%.

These goals are supported by the Park's WHPP objectives and management actions which include maintaining wet meadow acreage and reducing the extent of user-created unauthorized trails in desert scrub environments.

Natural Resources Agency- Safeguarding California Plan: 2018 Update

This is the State's roadmap for state agency efforts to protect infrastructure, communities, services, and the natural environment from climate change impacts. State agencies' programmatic and policy responses across different policy areas are covered under this strategy in addition to discussions on the ongoing related work with local and regional adaptation action and developments in climate impact science (State of California 2018). The update covers 33 examples of adaptation projects in the state. The Onyx SVRA's WHPP's goals and objectives of habitats and species will be based on current science which also considers impacts from climate change (see Climate Change Section 3.9).

Desert Renewable Energy Conservation Plan

BLM, along with the California Energy Commission, the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife, developed the Desert Renewable Energy Conservation Plan (DRECP) in 2016 as a Land Use Plan Amendment that balances development by renewable energy with landscape conservation. The DRECP designates zones where renewable energy can be developed while reducing the challenges of developing in those areas. It also designates areas of protected landscape as California Desert National Conservation Lands. One of the goals and objectives of the DRECP to conserve biological, physical, cultural, social, and scenic resources (BLM 2016). The conservation of biological resources including sensitive species such as the desert tortoise and Mohave ground squirrel parallels efforts that Onyx SVRA will be completing as part of this WHPP.

Mohave Ground Squirrel Conservation Strategy

The Mohave Ground Squirrel Conservation Strategy released by CDFW in 2019 details goals, objectives, and measures (management actions) to guide the conservation and recovery of the species (CDFW 2019). The measures to meet the goals and objectives include actions to be done by CDFW as well as actions that should be done by other land managers or researchers. For instance, one objective is to "monitor and minimize impacts of recreational activities to [Mohave ground squirrel] and its habitat" (CDFW 2019). A corresponding measure for that objective is to minimize unauthorized OHV use. This has been incorporated into the WHPP in Section 4.2.1 Conservation and Long-term Protection Objectives.

Mojave Desert Ecoregional Assessment

The Nature Conservancy of California completed an assessment of the Mojave Desert as an ecoregion in 2010. In the assessment, the Mojave Desert has a distinctive and rich biological diversity that includes vast areas of undisturbed lands. The lack of disturbance is very important since the Mojave's arid climate, fragile soils, and slow pace of ecological succession can slow

recovery when disturbed. The varied topography and soils support a wide variety of plant communities that provide habitat to many animal species (Randall et al. 2010). Although the assessment focus on conservation values of areas of disturbance, Onyx SVRA falls in the moderately degraded conservation value due to land fragmented by roads and OHV trails. The WHPP could help align with conserving habitat and reduce disturbance in sensitive areas in an effort to not increase the conservation value to highly converted (land in urban and agricultural areas that is fragmented and most impacted by human uses) as stated in the Conservancy's assessment.

West Mojave Plan

The 2006 West Mojave Plan amended the BLM's California Desert Conservation Act and serves as a "multi-species conservation strategy" across both public and private lands (BLM 2006). It includes a Habitat Conservation Plan for private lands and contains management strategies for over 100 species, including desert tortoise and Mohave ground squirrel. The plan also established new ACECs and amended pre-existing ACECs (BLM 2005). Management strategies for species conservation are supported by the Park's goals and objectives for conserving habitat for both desert tortoise and Mohave ground squirrel.

West Mojave Route Network Project (WMRNP)

The WMRNP guides the management of transportation and travel for 9.4 million acres of land in Southern California, 3.1 million acres of which are managed by BLM. This project includes the designation of travel routes and the associated management plans and seven Land Use Plan Amendments (LUPA) to recreation, motor vehicle access, and livestock grazing. These LUPAs include mapping more potential designated routes for motor vehicle access. These routes are existing unofficial roads and trails with existing disturbance. Additionally, WMRNP limits stopping and camping to previously disturbed land within 50 feet of the route's centerline if within a desert tortoise ACEC. Outside of a desert tortoise ACEC, these activities are limited to previously disturbed land within 100 feet of the route's centerline (BLM 2019, USFWS 2019). Because Onyx SVRA is a series of checkerboard parcels with corresponding BLM parcels, CDPR has previously adopted restrictions that the BLM has placed on camping and OHV access within the area of Onyx SVRA. These amendments align with the goals and objectives of the WHPP, specifically in regard to soil, wildlife, and habitat conservation.

Western Joshua Tree Conservation Plan

The draft Western Joshua Tree Conservation Plan (Conservation Plan) was released in 2024 to fulfill obligations for the Western Joshua Tree Conservation Act passed in July 2023. The Conservation Plan outlines management actions, monitoring, and adaptive management guidelines that can be implemented by various land managers to aid in conserving Joshua Trees.

Management Actions outlined in the Conservation Plan are organized within the categories of Avoidance and Minimization, Land Conservation and Management, Tribal Co-Management, Research to Inform Long-Term Conservation, and Education and Awareness (CDFW 2024b).

Since Onyx SVRA has the "largest contiguous stands of western Joshua trees in the California State Park System" the conservation of the species is an important component of the WHPP (CDFW 2024b). Many of the Management Actions in the Conservation Plan can be implemented in the Park, including but not limited to: retaining healthy trees, implementing avoidance buffers, preventing unauthorized vehicle use, preventing overgrazing, minimizing impacts from invasive plants and from pesticide application, fighting active wildland fires, and minimizing impacts from fire suppression. More information on the management of Joshua trees in the Park can be found in Section 3.6 Rare or Endangered Plant and Animal Species.

2.2 Management Units

Resource Management Units (MUs) provide a structure for implementing natural resource management activities. MUs are defined land areas with unique identifiers that constitute manageable-sized areas for organizing and scheduling management work. MUs were designated for Onyx SVRA in 2020 to aid in the management of the Park's natural resources. MU delineation at Onyx SVRA is based on vegetation community differences, OHV use type, and maintenance regimes. A map of the MUs in the Park is below in Figure 7. Six MUs and one Sub-Management Unit are in Onyx SVRA.

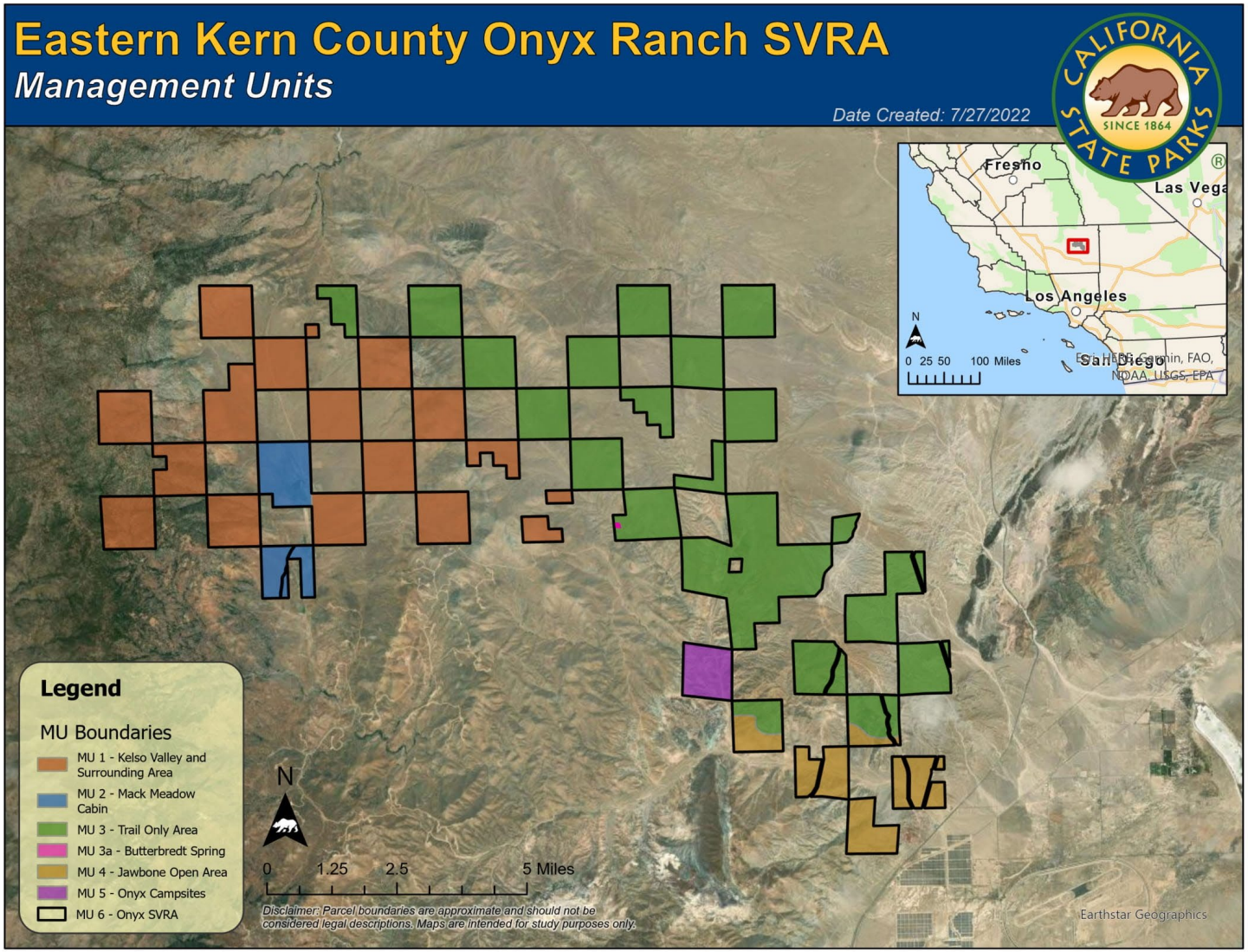


Figure 7. Management Units at Onyx SVRA. Note: MU 6 is the entire Park.

MU 1- Kelso Valley and Surrounding Area (Figure 8): The dominant vegetation community in this MU is composed of Joshua tree woodland, upper Mojave woody scrub, oak forest/woodland, and pine forest/woodland. No OHV riding is permitted in this area and there are zero miles of CDPR managed roads in this MU. Cattle grazing pastures and cattle drinking ponds are within this area.

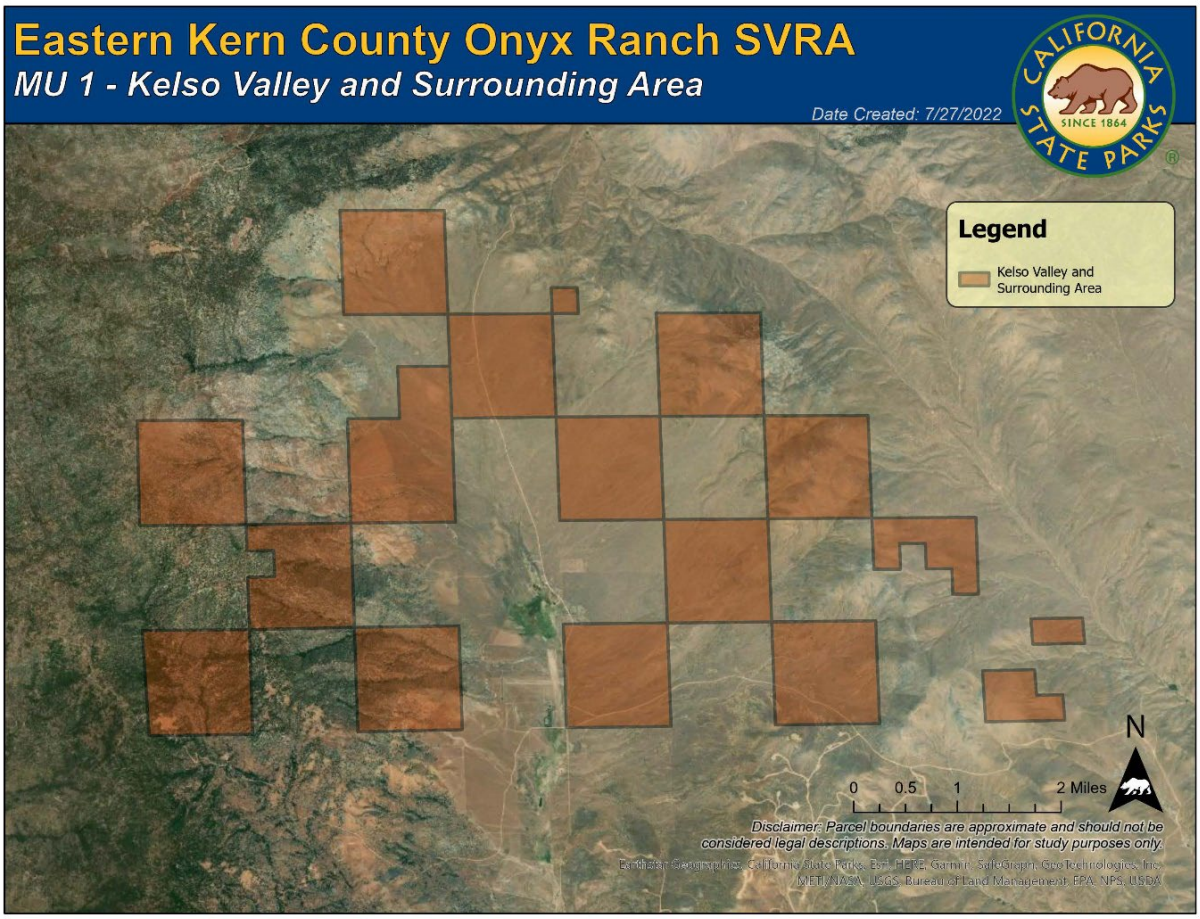


Figure 8. Map of MU 1.

MU 2- Mack Meadow Cabin (Figure 9): The dominant vegetation community in this MU is meadow and seep, annual grassland, and desert wash and terrace. No OHV riding is permitted in this area and there are zero miles of CDPR managed roads in this MU. Cattle grazing pastures and cattle drinking ponds are within this area.

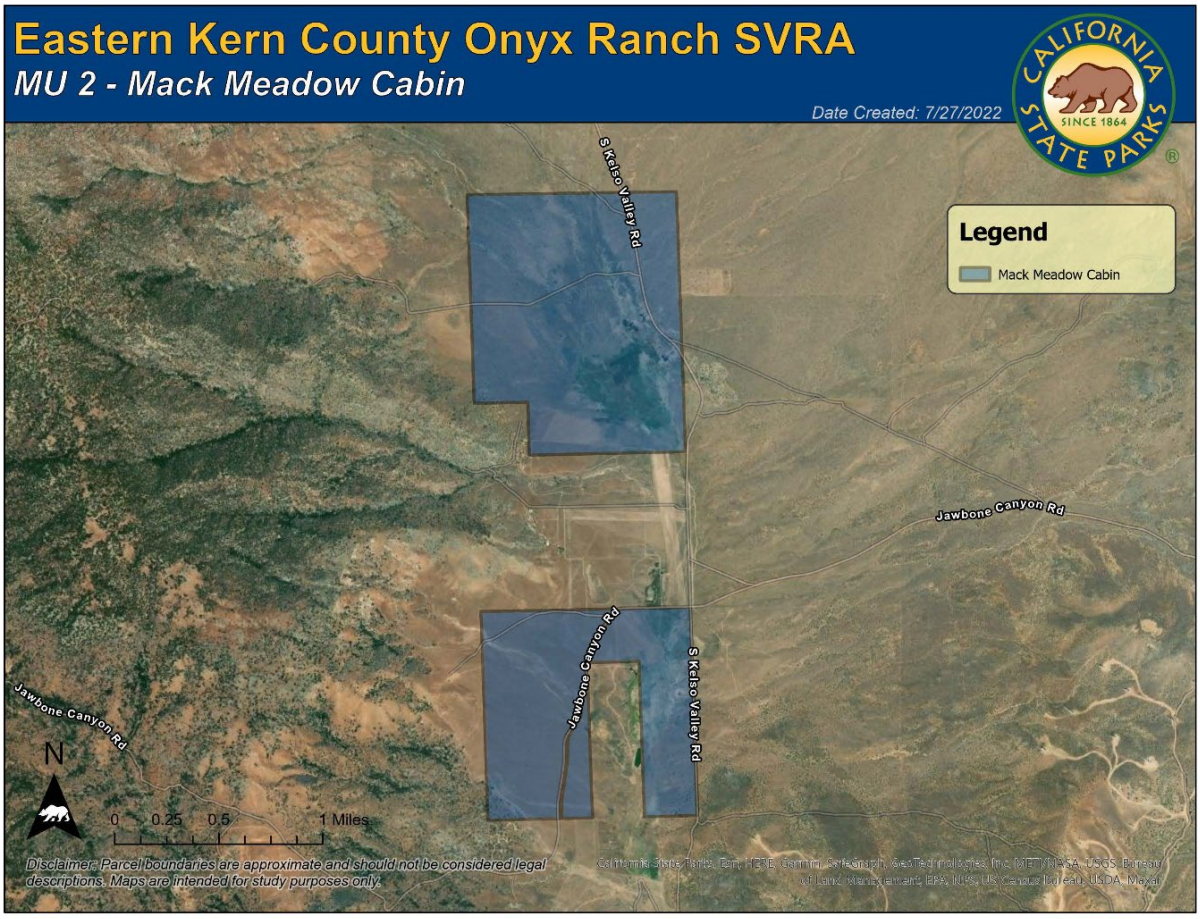


Figure 9. Map of MU 2.

MU 3- Trail Only Area (Figure 10): The dominant vegetation community in this MU is Joshua tree woodland/blackbrush scrubland, creosote and bursage scrub, and mixed Mojave woody scrub. This area is designated for trail only OHV use and often requires erosion and fence repair. Signs in MU 3 and at the boundaries of the Open Areas indicate that riding is restricted to trails only. There are 17.2 miles of trails within this MU which were inherited when the property was acquired. Within this MU are two freshwater spring ponds that require cattail management and one intermittent spring. This area is within a grazing pasture. The PCT crosses this MU.

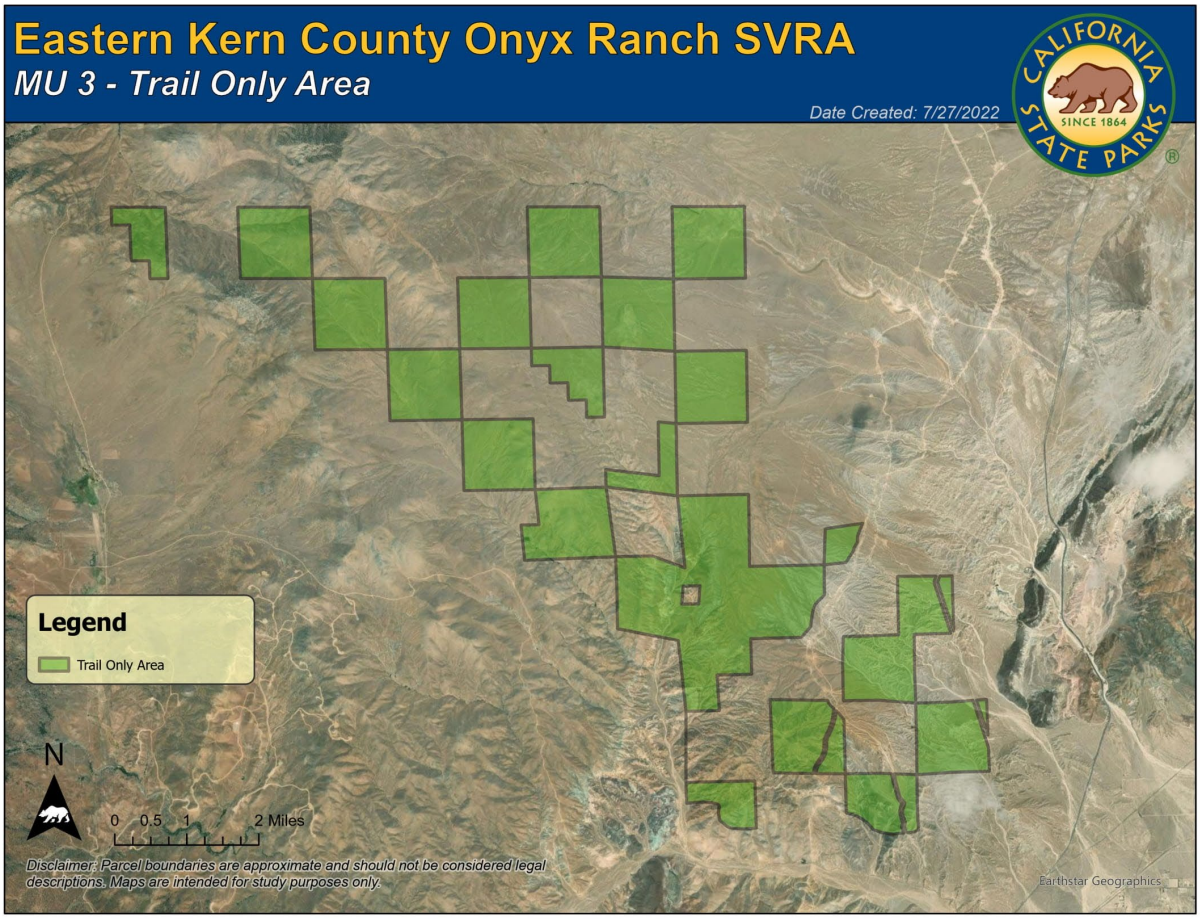


Figure 10. Map of MU 3.

MU3a- Butterbredt Spring (Figure 11): The dominant vegetation community is wetland/riparian and Joshua tree woodland/blackbrush scrubland. This MU is adjacent to an OHV trail and has an unauthorized pedestrian trail within it. Fence repair and cattail management are often needed.

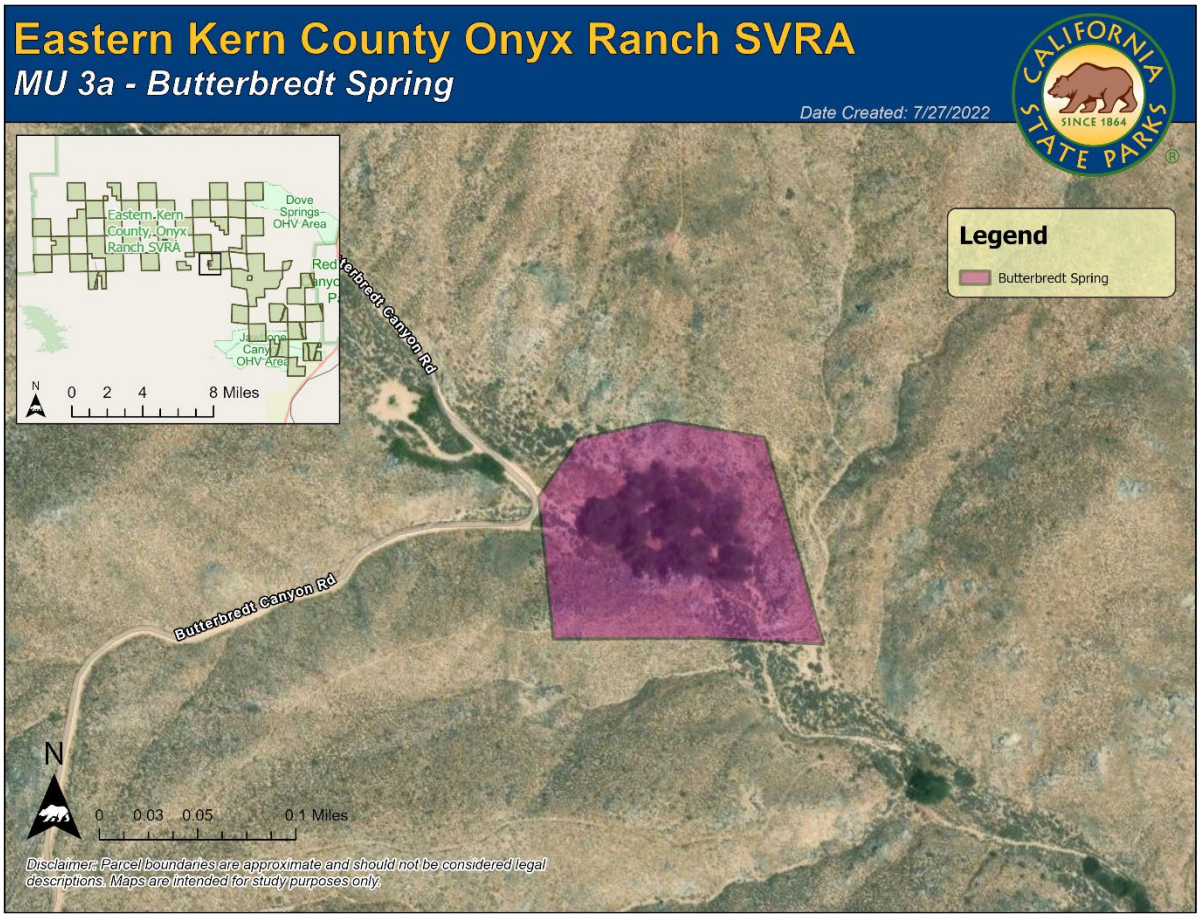


Figure 11. Map of MU 3a.

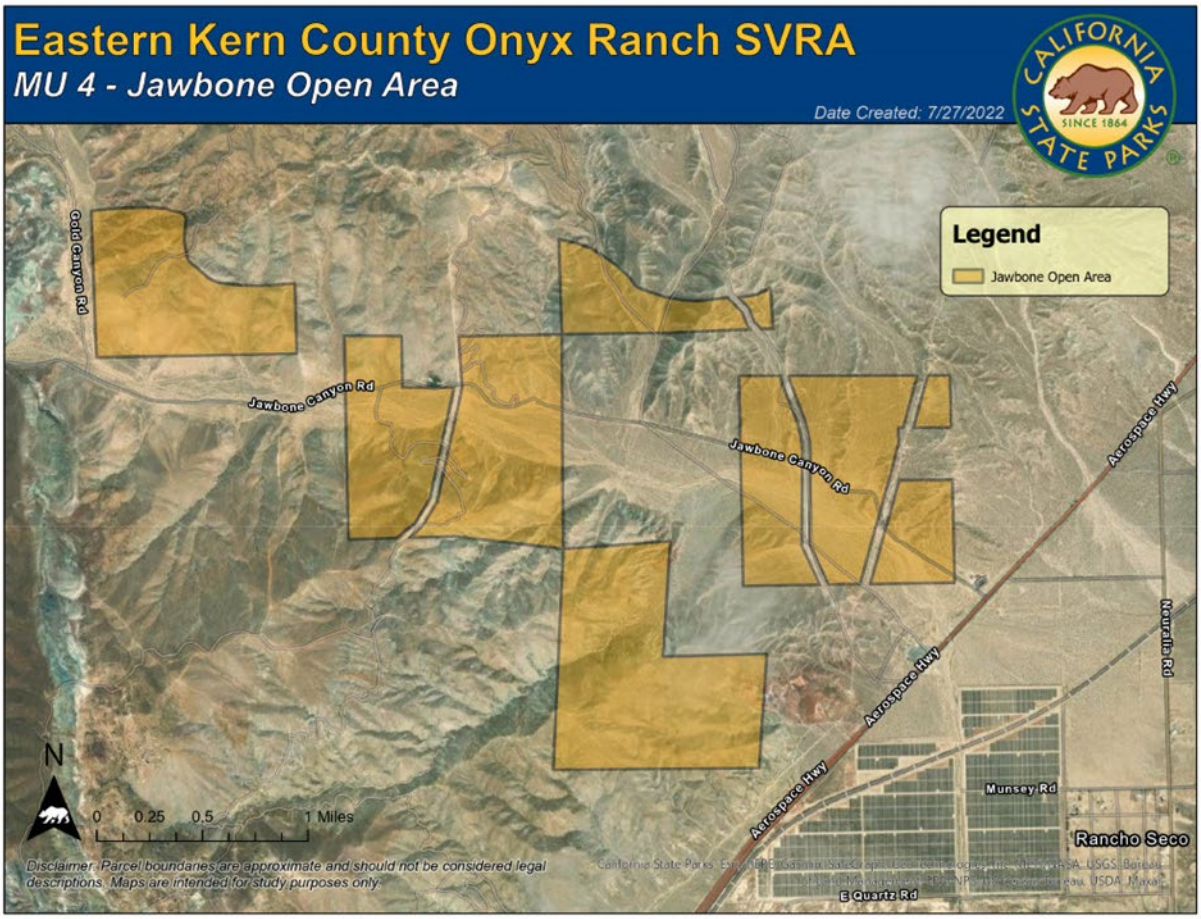


Figure 12. Map of MU 4.

MU 5- Onyx Campsites (Figure 13): The dominant vegetation community in this MU is creosote and bursage scrub, and desert wash and terrace. This area is designated for trail only OHV use and there are designated primitive campsites throughout. There are 2.2 miles of trails within this MU. Designated trails and campsites were inherited when the property was acquired. It often requires fence repair. This area is within a cattle grazing pasture.

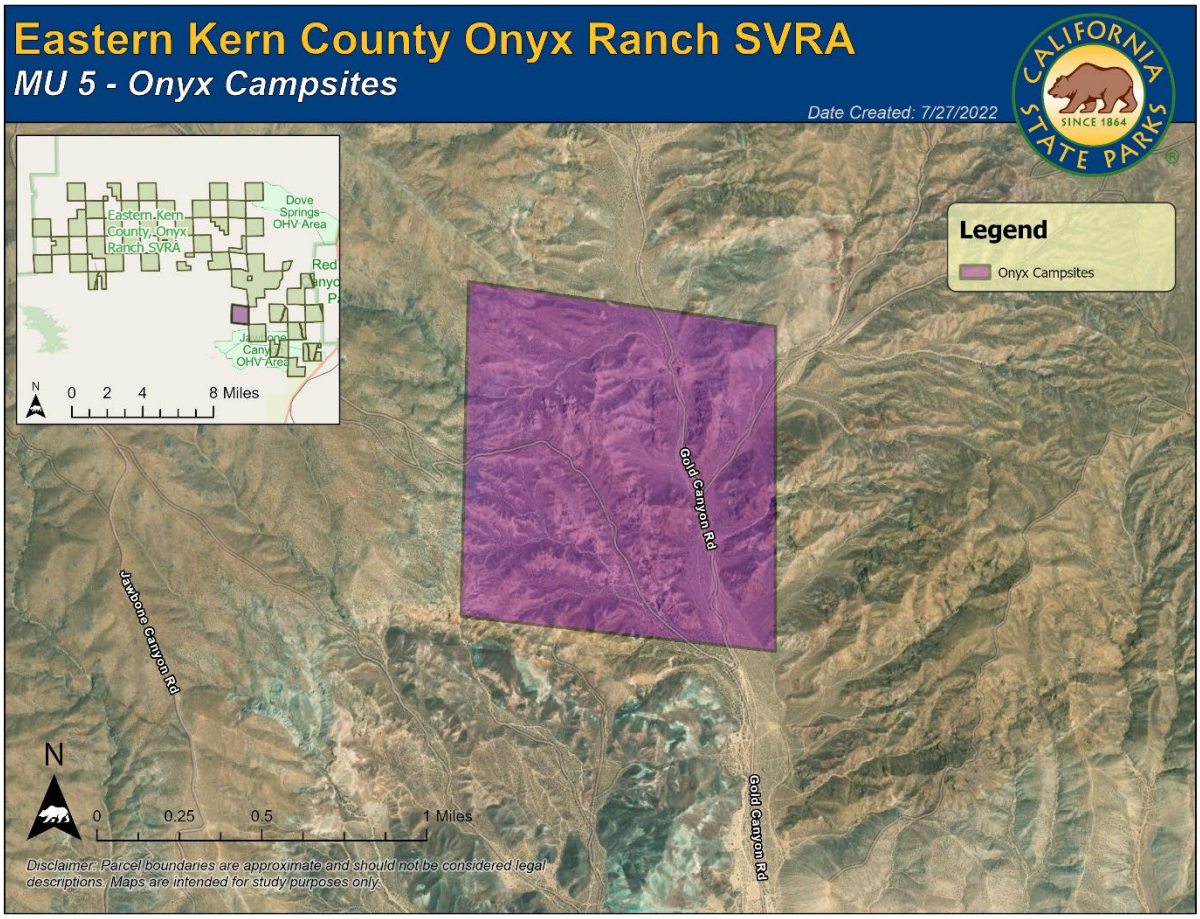


Figure 13. Map of MU 5.

MU 6- Onyx SVRA (Figure 14): This MU is the entire park and consists of the previous five MUs. The dominant vegetation community is Joshua tree woodland/blackbrush scrubland and creosote and bursage scrub. There is mixed OHV use and a cattle grazing allotment across the MU. There are 21 miles of CDPR managed trails within this MU which were inherited when the property was acquired.

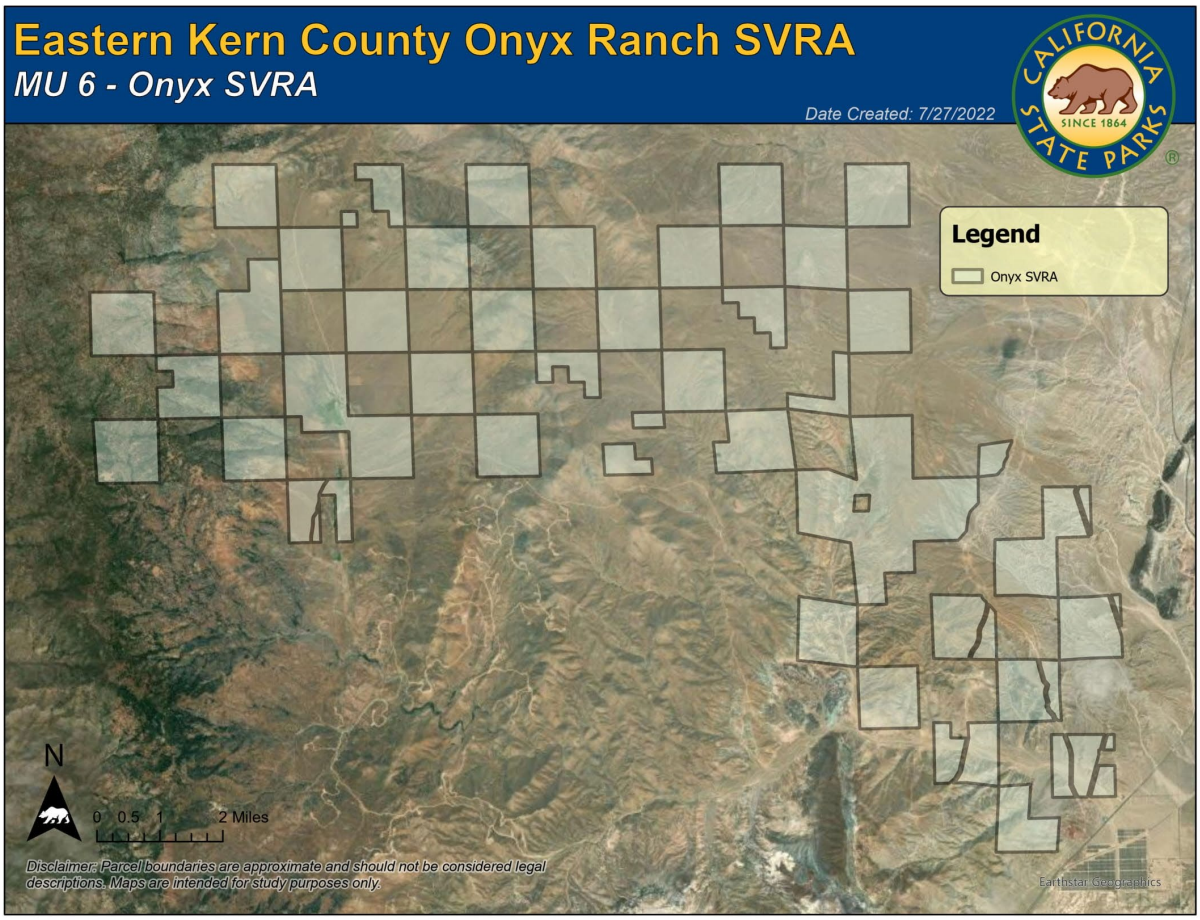


Figure 14. Map of MU 6.

3 Natural Resource Assessments

The resource assessments include an overview of PRC-required wildlife and native plant inventories, invasive species distribution, and details regarding sensitive resources and wildlife movement, including landscape connectivity.

3.1 Soils

In general, the soils within Onyx SVRA consist of Quaternary alluvial and fluvial sediments distributed and deposited by the desert washes, which mostly drain southward and southeastward within the SVRA. These soils range from clays to sandy loams to coarse sands with gravel, cobbles, and boulders. These materials are derived mostly from underlying granitic rock and metamorphic rock. Pleistocene non-marine sediments, and deposits eroded from granitic rock bedrock near the surface lie beneath the SVRA. At deeper depths there is granite bedrock and older alluvium. Surface soils vary from clayey to sandy loam. The sandy areas are more susceptible to wind erosion as well as erosion on slopes where vegetation cover is minimal.

Higher elevations are underlain by Mesozoic granite rocks, Pre-Cenozoic granitic and metamorphic rocks, or Pre-Cretaceous metamorphic rocks. The steepest slopes are also concentrated in these high elevation areas and are more susceptible to erosion. Areas with the lowest erosion potential have either Quaternary alluvium, derived from granite bedrock, or have Pleistocene non-marine units and gentle slopes. See Figure 15 and Figure 16 below for a map and legend of geologic features and soil types within Onyx SVRA.

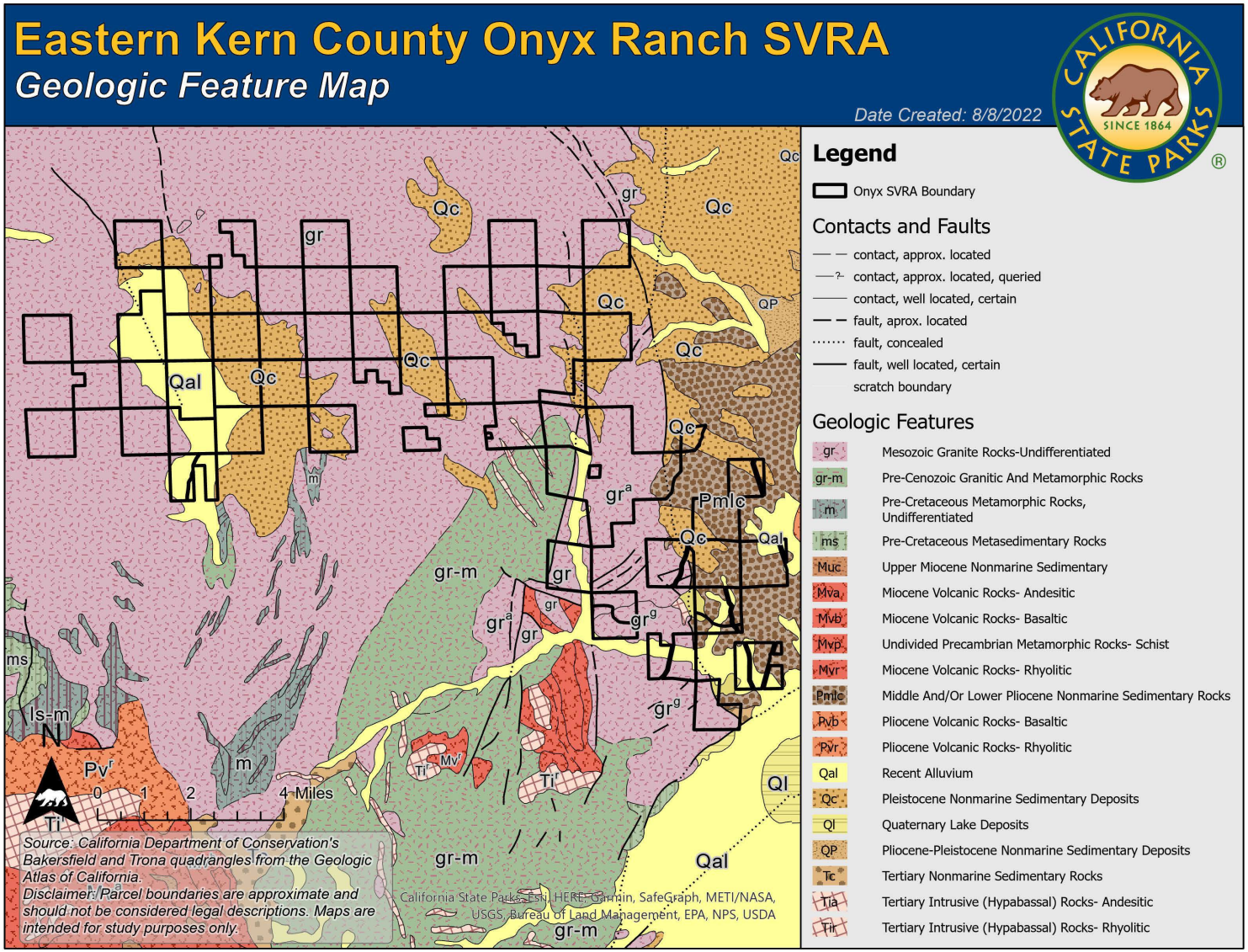


Figure 15. Map of the geologic features in Onyx SVRA. Contacts shown in the map are boundaries separating rock bodies.

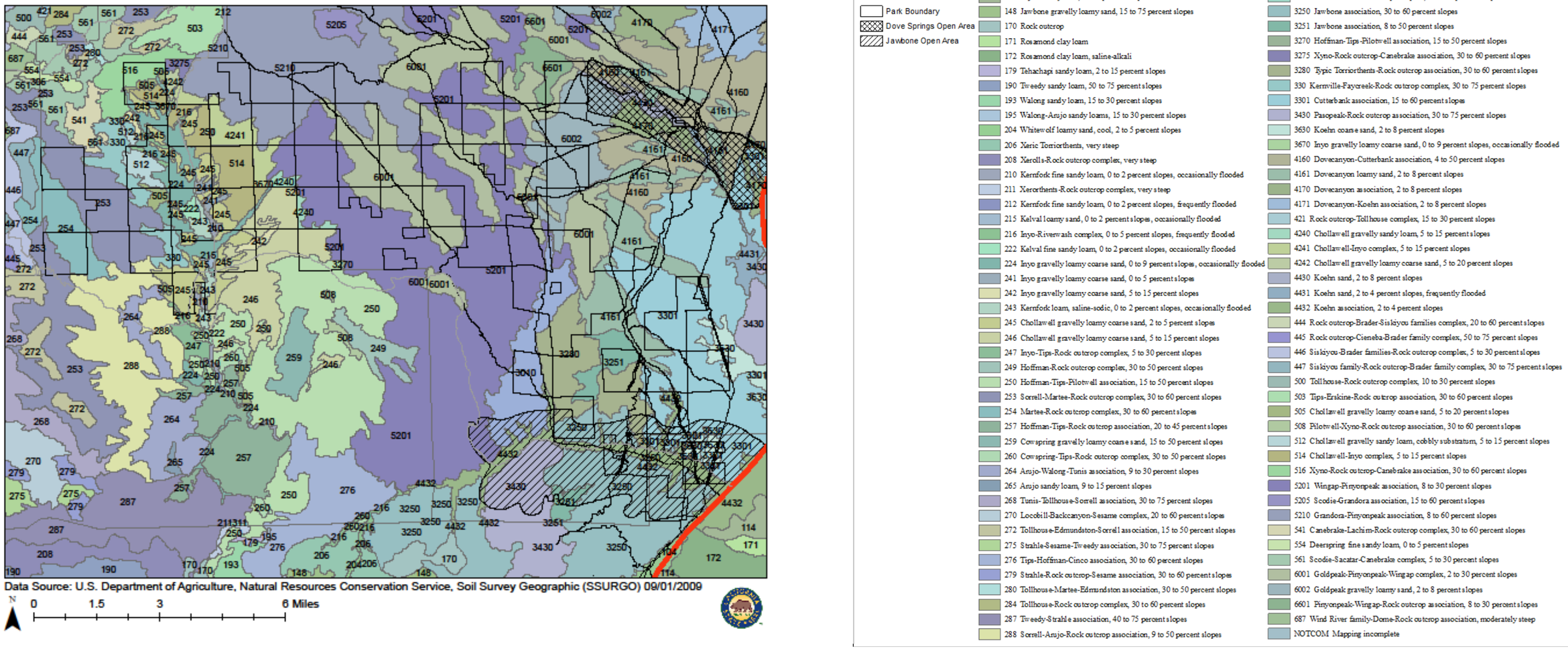


Figure 16. Map and legend of the soil types in Onyx SVRA.

3.2 Wildlife Inventory

The wildlife inventory was initially compiled using reports generated from the CDFW California Natural Diversity Database (CNDDB), United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Rare Plant Inventory. The IPAC search referenced a 5-mile buffer zone enclosing and surrounding the Park footprint to ensure nearby occurrences were captured of similar habitat types. For the CNDDB and CNPS searches, each quadrant encompassing or adjacent to the Park was included, resulting in a 20-quadrant inventory. These sources were accessed on May 5, 2022 and saved for future reference.

Field assessments conducted over the past ten years were used to refine the wildlife inventory and confirm the presence of species within the Park. These field assessments include natural resource surveys conducted in 2012 during the acquisition of the Park (CDPR 2013), annual surveys done since 2016 by park staff, and incidental observations by natural resource staff. Annual monitoring of vegetation, birds, small mammals, and reptiles are done at twenty-one trail and non-trail habitat monitoring plots throughout the Park. Details on these assessments, divided by taxon or family group, are included below. The full wildlife inventory is available in Section 10 Appendix 1 and additional detail on methodology and assessment of bias and uncertainties of these assessments can be found in Section 12 Appendix 3.

Acquisition EIR Surveys

Assessments were completed in 2012 to support the Acquisition EIR (CDPR 2013). Assessments included surveys for botanical resources, desert tortoise, birds, and special status wildlife. The species lists and accounts from these assessments were incorporated into the wildlife inventory.

Bats

Six locations at waterbodies are monitored acoustically using Wildlife Acoustics SM4 devices. Passive acoustic surveys are done in the summer and fall for up to a two-week session each. The data is analyzed using the auto identification software of Sonobat 4.4.5. Species with a probability of presence of >75% in Sonobat are manually vetted by park staff. Additionally, species with auto identifications with a probability of <75% are manually vetted if the call had species-diagnostic features. A subset of the results processed by park staff is sent to an experienced bat biologist for confirmation. At Mack Meadow Cabin, two bat houses are attached back-to-back on a 16 ft pole and are monitored quarterly for presence.

Birds

Avian monitoring is done annually in the spring between April and May and in the winter between November and January. One point count survey is done at each of the 21 Habitat Monitoring System (HMS) plots per season (spring and winter). Surveys are conducted when birds are most active in the morning and are concluded by 10:00 AM, when bird activity slows down. Observers survey each location for five minutes and record the data in the Avian Field Data Collection Sheet, which can be found in Section 12 Appendix 3: Monitoring Methodology. Data collected includes the observer name, plot number, date, time, habitat type, air temperature, wind speed, wind direction, and cloud cover. For each observation, the species, number of individuals, and distance of the bird from the plot center are recorded. It is noted whether the observation was visual, auditory, or both. Breeding status and behavior are indicated using the codes on the data collection sheet for copulation, territorial display, distraction display, food carry, fledglings, fecal sac carry, material carry, nest found, and/or pair. It is noted if the observation was a fly over bird and if it is an adult or juvenile, if known.

Small Mammals

Small mammal monitoring is done in the fall (September or October). The 21 HMS plots are alternated each year so that 10 or 11 of the HMS plots are monitored annually. At each site, 36 Sherman live traps are set out in a trapping grid and monitored over a three-night trapping period. Traps are spaced apart by 10m and a pin-flag is placed next to the trap. Traps are baited with mixed birdseed and/or oats mixed with peanut butter and set/opened late in the afternoon. Each trap has a small cloth inside to provide insulation against extreme temperatures. The following morning, they are checked and closed for the remainder of the day to avoid trap mortality for any present diurnal species. For each small mammal individual captured, the species, sex, weight, and external reproductive condition is recorded.

Large Mammals

Large mammal presence monitoring is completed annually in July or August at each water body location in the Park. Reconyx wildlife cameras with infrared motion detectors are set up to run 24 hours a day for two weeks. The photos are then reviewed and the number and type of species, and number of species occurrences are recorded. A time-gap interval of 10 minutes defines a new species occurrence.

Reptiles

Reptile visual encounter surveys are conducted in the spring (generally, March to May) using transect sampling. Surveys are done when reptiles are most active, generally between 08:00-

13:00. Each HMS plot is surveyed once for one hour, consisting of two 30 minute transects. The transects are in two of the cardinal directions that were randomly selected for each plot during the first year of monitoring (N, E, S, or W). Reptiles observed within a 10-meter wide belt (5 meters on each side of the survey line) are counted. Using the Reptile Field Data Collection Sheet (located in Section 12 Appendix 3: Monitoring Methodology), the following data is recorded: plot number, date, weather conditions, air temperature, and surface temperature. For each individual, the station direction, species, sex (if known), age (adult or juvenile), time of observation, and microhabitat of observation is recorded.

Amphibians

Aquatic Visual Encounter Surveys for amphibians are done annually in the spring and early summer at all water bodies in the Park. Visual encounter surveys and binocular scanning are conducted in the mid-morning to late afternoon. Each location is surveyed several times throughout the spring and early summer following a protocol adapted from Fellers and Freel 1995. Surveys involve scanning with binoculars and recording the species and number of individuals observed. While walking towards, around, and along water bodies, a visual search is done of the banks, rocks, logs, pond bottom (if water clarity permits), and the surface of floating vegetation within a few meters of the surveyor's location. Surveyors visually search for eggs and egg-clusters. If needed, a net is used to identify/catch amphibian/larvae for identification. All life history stages and numbers are recorded for each species (e.g., eggs, larvae, sub-adults, adults), as well as the total survey time per each location.

3.3 Native Plant Inventory

Just as with the wildlife inventory, the plant inventory was initially compiled using reports generated from the CNDDB, IPaC, and CNPS Rare Plant Inventory and confirmed with field assessments from the past ten years. Below is a discussion of these assessments. More details on methodology and assessment of bias and uncertainties of these assessments can be found in Section 12 Appendix 3.

Plant Communities

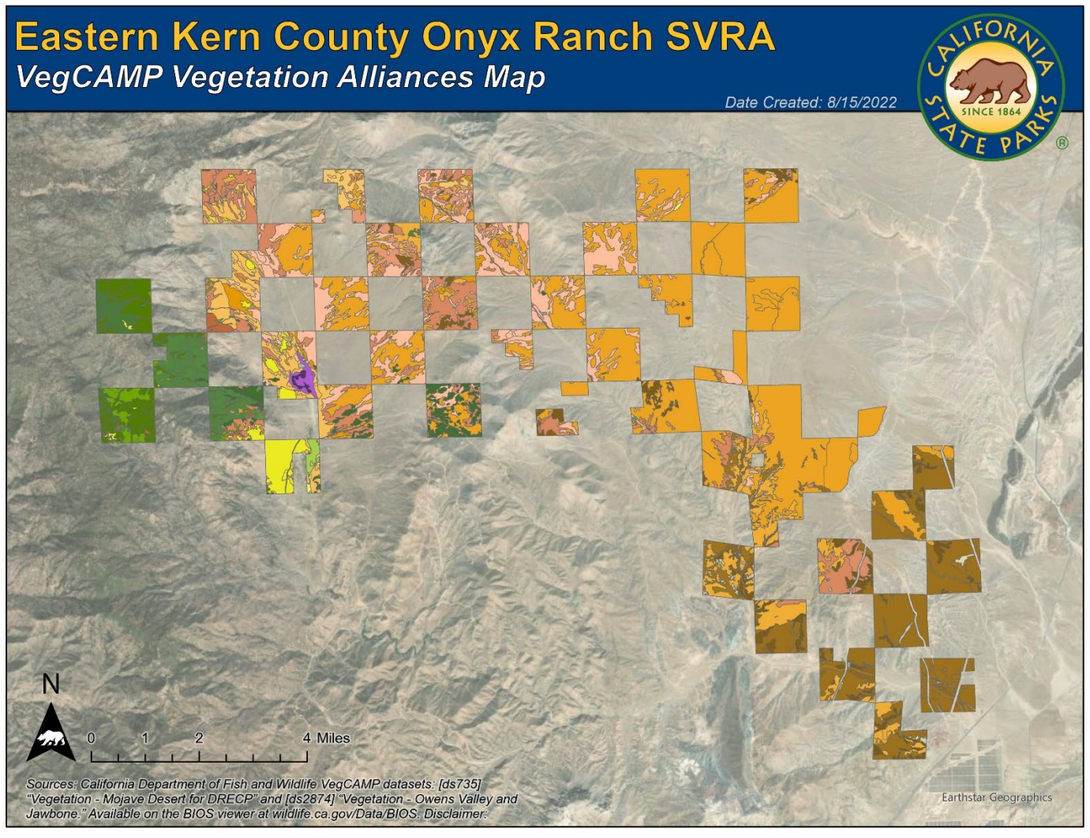
The native plant community inventory was compiled using data from CDFW's Vegetation Classification and Mapping Program (VegCAMP), downloaded from the BIOS viewer in Spring 2022 (CDFW n.d. a). Park staff conducted surveys in Spring 2022 to validate the data and identify additional herbaceous community types. More information and results can be found in Section 3.4.

Annual Surveys

Vegetation monitoring is done at all of the 21 HMS plots each spring when vegetation is at or near peak phenology. Vegetation monitoring protocols follow the California Native Plant Society relevé sampling technique. Information about each HMS plot's location, habitat, and species composition are recorded. Each plot is $30m^2$ and the same vegetation plots are monitored each year. Every species in the plot is recorded and percent cover is estimated visually.

3.4 VegCAMP and Plant Communities

The state's current standard for vegetation classification and mapping is known as VegCAMP and is administered by CDFW. VegCAMP classifies vegetation according to the National Vegetation Classification System standards, which is a hierarchal classification of vegetation types, distinguishing alliance and association at the finest scale. The footprint of Onyx SVRA is covered by recent VegCAMP vegetation maps, completed in 2020, 2021 and 2013. (Menke et al. 2013, Reyes et al. 2020, Reyes et al. 2021) A map of the vegetation alliances in Onyx SVRA can be seen in Figure 17 below. More information and monitoring protocols for VegCAMP can be found in Section 12 Appendix 3.



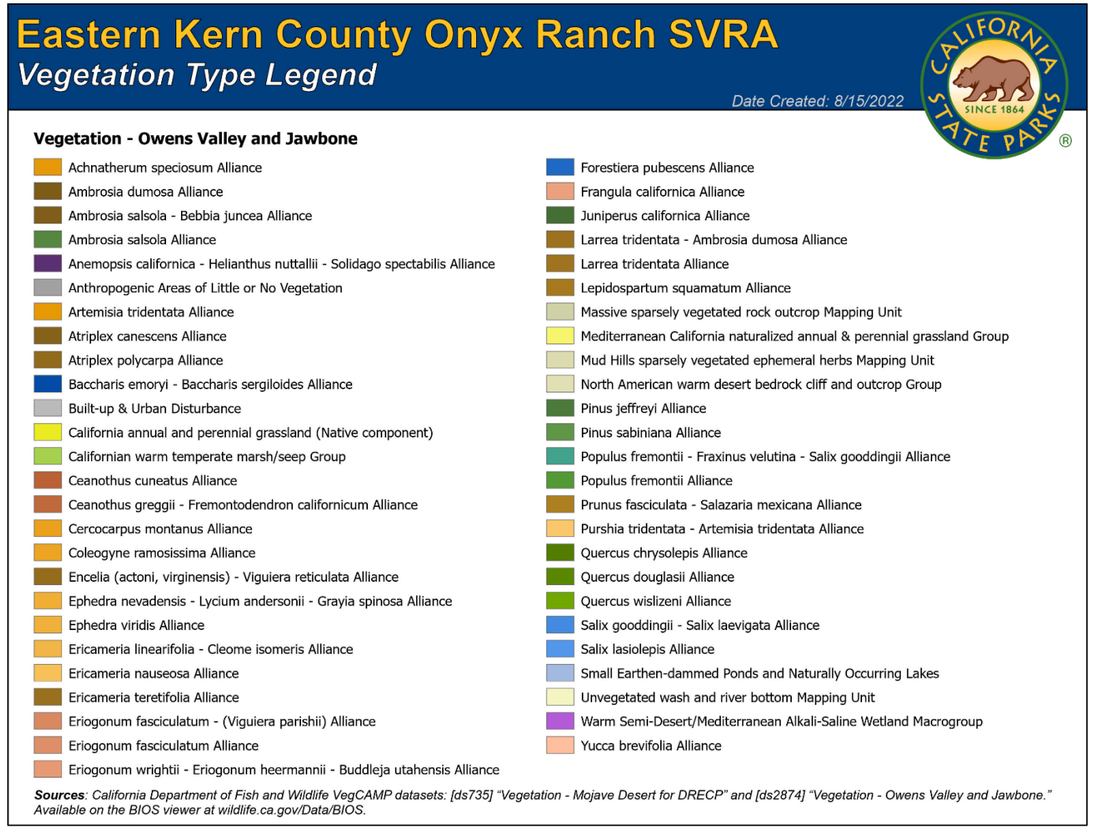


Figure 17. Map and Legend of VegCAMP vegetation communities in Onyx SVRA.

3.5 Sensitive Resource Areas

VegCAMP, discussed in Section 3.4, evaluates vegetation alliances, also known as natural communities, to assign them global and state rarity ranks. These alliances are ranked at the state level from 1 (very rare) to 5 (stable). Alliances with a state rank 1, 2, or 3 are Sensitive Natural Communities that should be addressed in environmental review. More information about alliances is available in the Manual of California Vegetation online (CNPS 2022). A map showing the Sensitive Natural Communities displayed by their state rank in Onyx SVRA is below in Figure 18. Figures 19 – 21 show maps of the Sensitive Natural Communities displayed by the specific alliances.

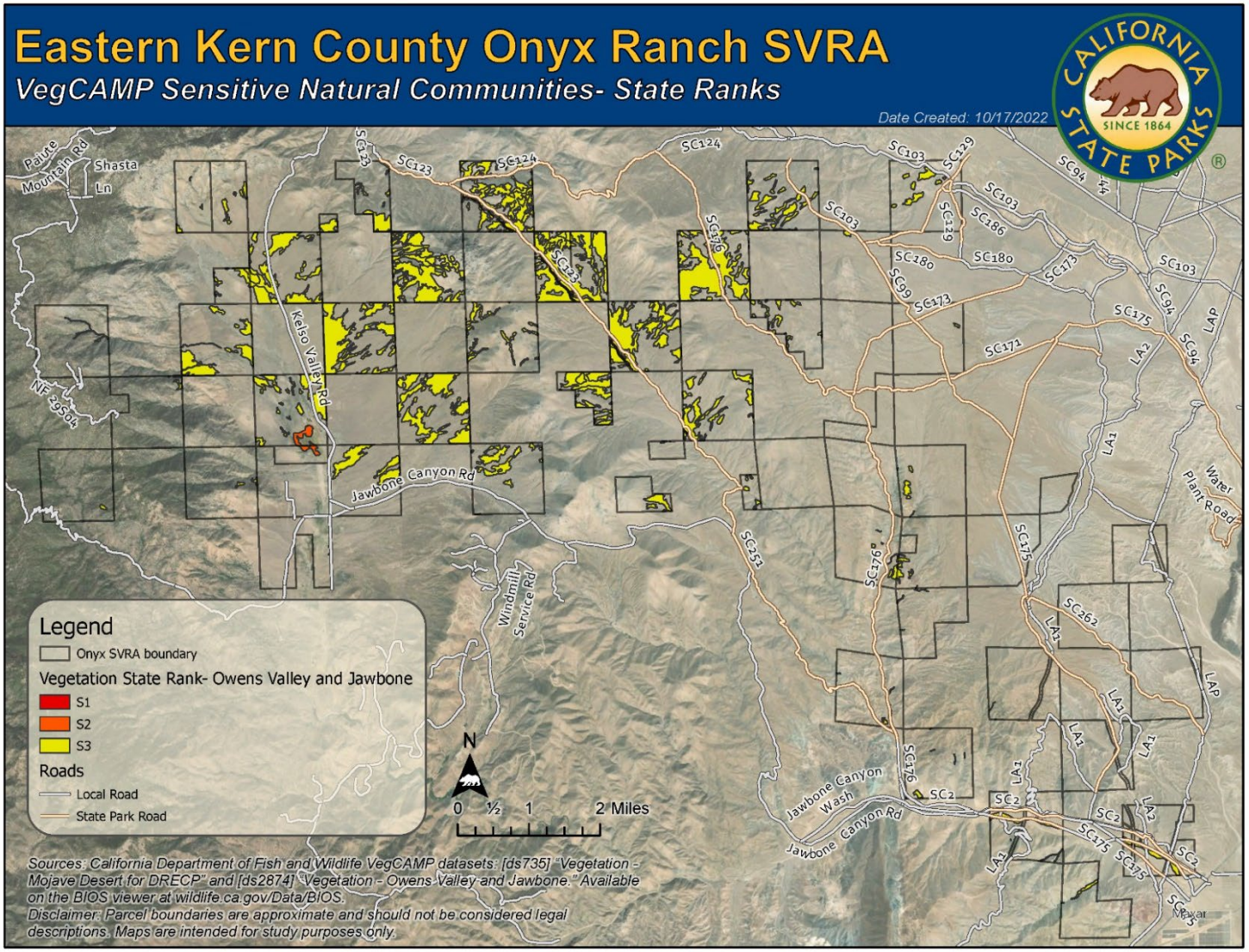


Figure 18. Map of the Sensitive Natural Communities with state rarity ranks of S1, S2, and S3 throughout Onyx SVRA.

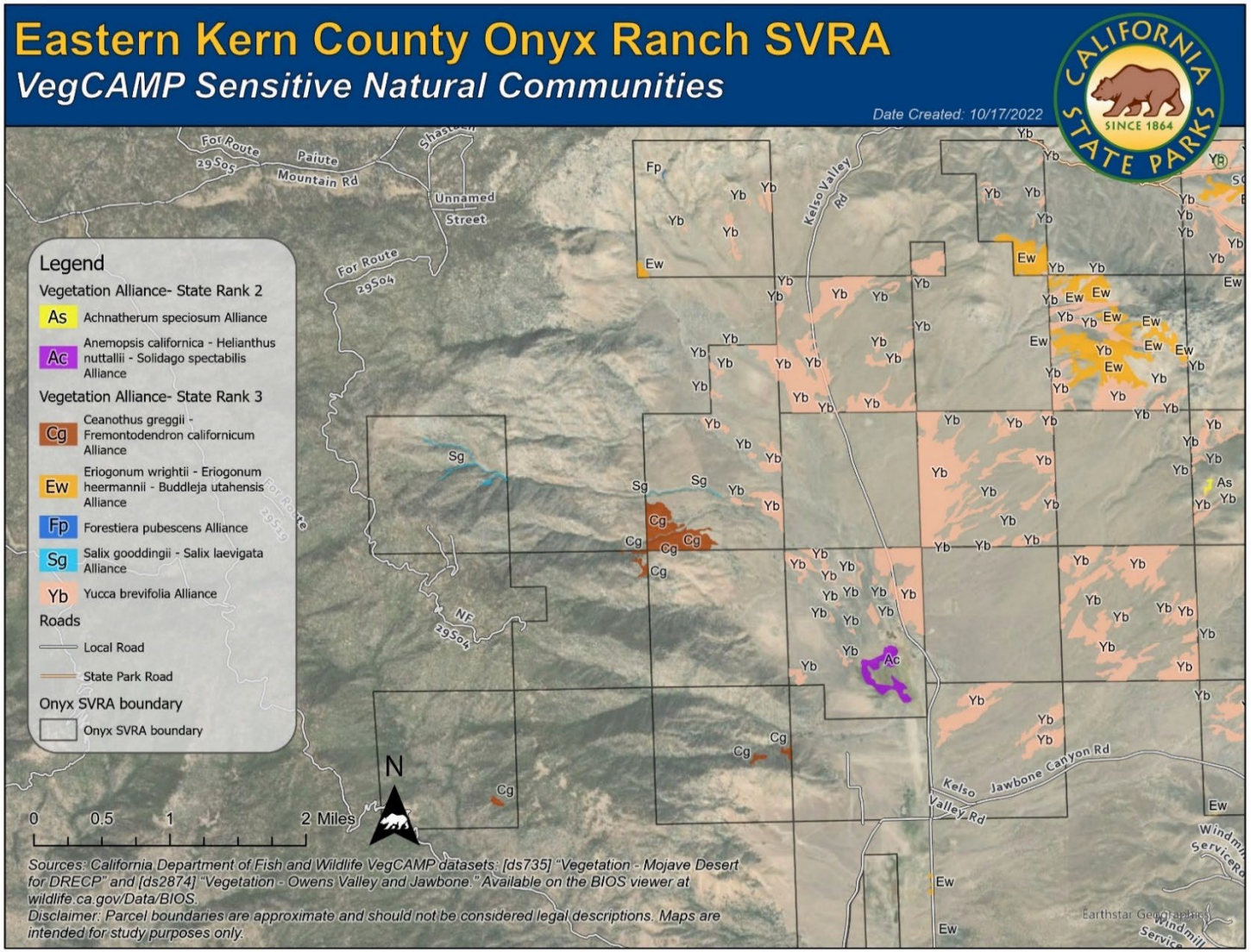


Figure 19. Map of the Sensitive Natural Communities in the western portion of the Park displayed by the vegetation alliances.

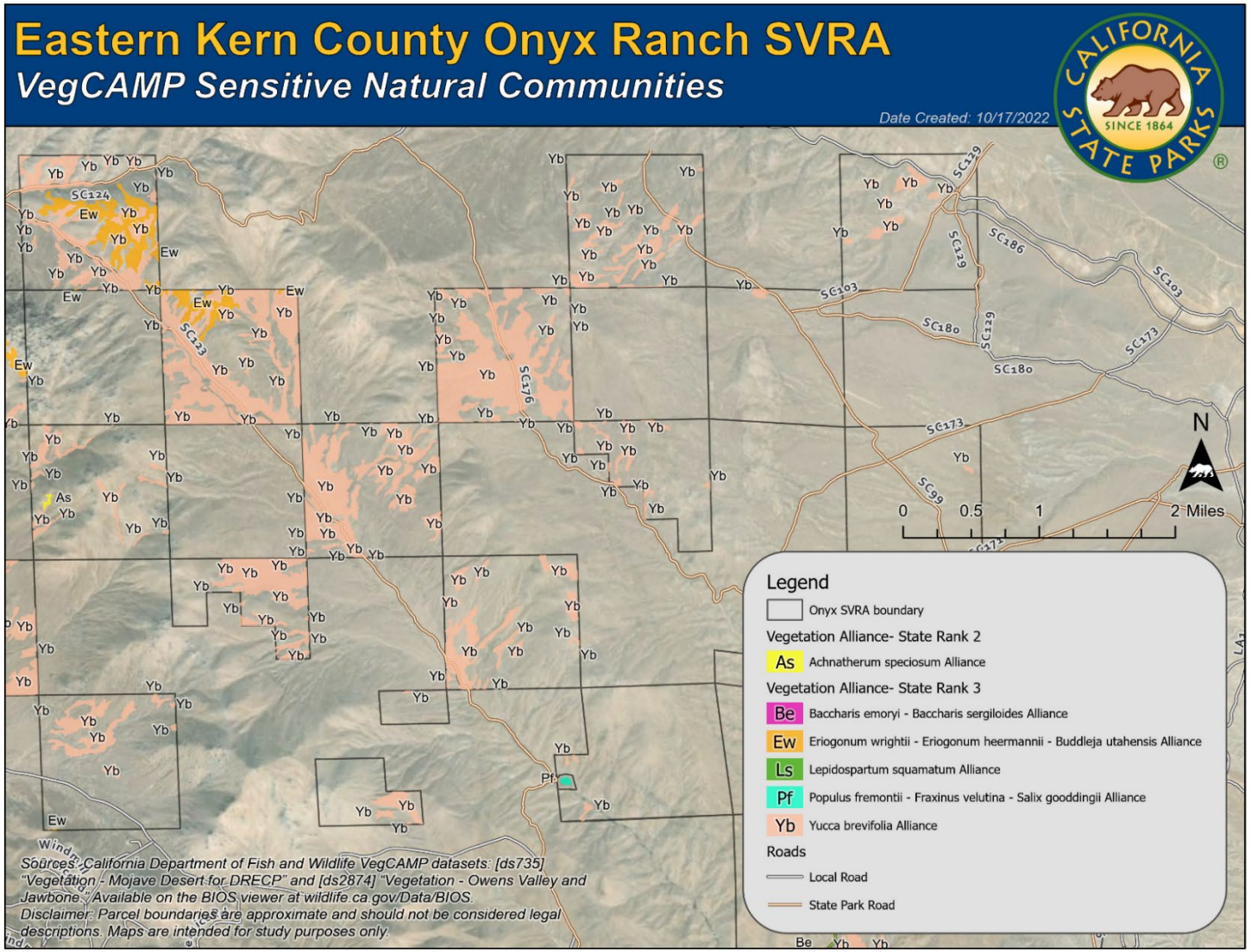


Figure 20. Map of the Sensitive Natural Communities in the central portion of the Park displayed by the vegetation alliances.

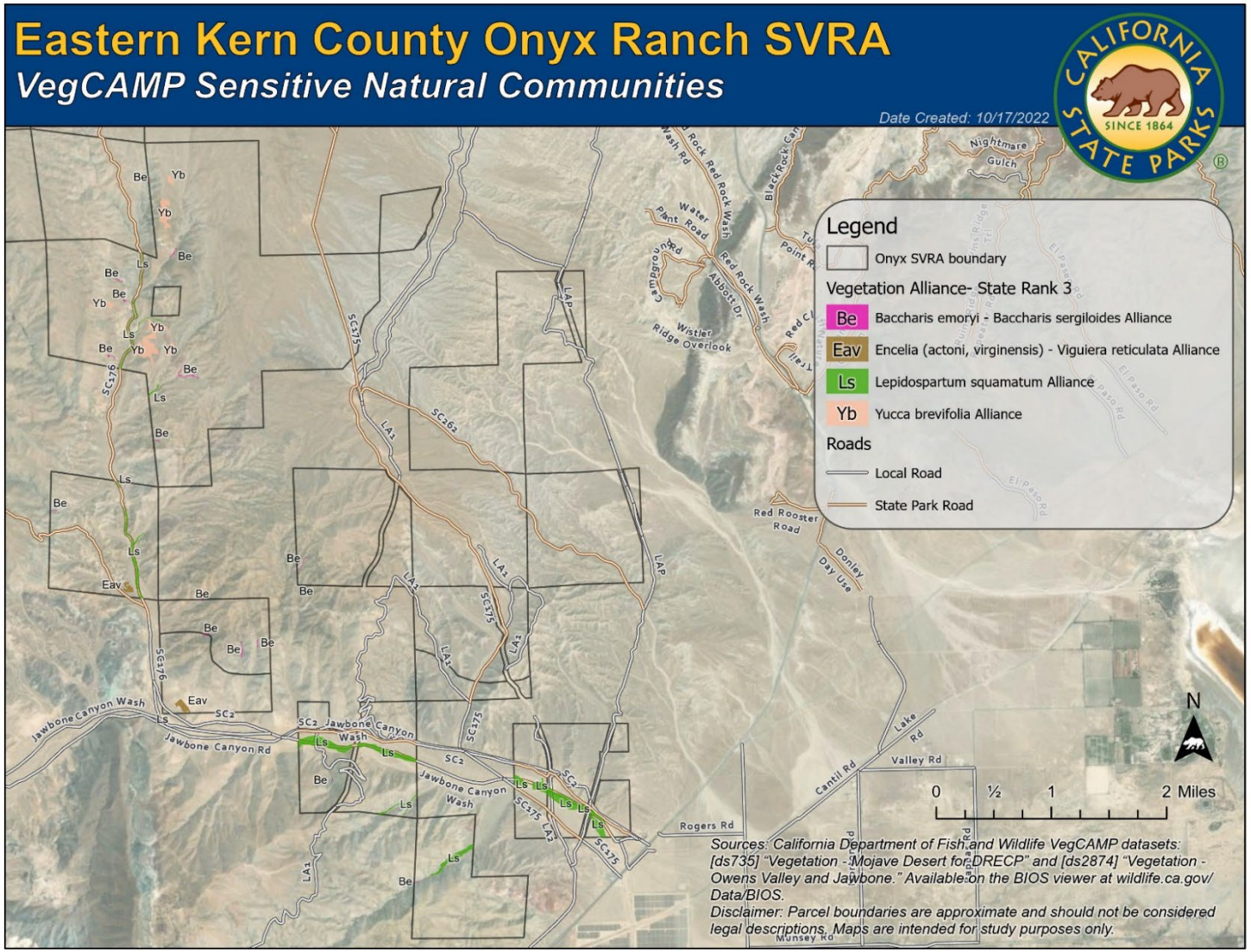


Figure 21. Map of the Sensitive Natural Communities in the eastern portion of the Park displayed by the vegetation alliances

3.6 Rare or Endangered Plant and Animal Species and their Supporting Habitats

Special-status species are those plants and animals that are legally protected or otherwise recognized as vulnerable to habitat loss or population decline by federal, state, or local resource conservation agencies and organizations. Special-status species include:

- Species that are listed as threatened or endangered under the California Endangered Species Act or Federal Endangered Species Act
- Species considered as candidates or proposed for listing as threatened or endangered under the California Endangered Species Act or Federal Endangered Species Act
- CDFW Species of Special Concern (SSC)
- Fully protected species per California Fish and Game Code
- Plants considered by the CNPS and CDFW to be rare, threatened, or endangered

Onyx SVRA provides habitat for several special-status species, many of which have been found within or near the Park's boundaries. Special status species are considered during the scoping phase and are discussed in the Project Evaluation Forms for all potential projects in the Park. Habitat and occurrence information for migratory special status species, rare plants, and species of special concern can be found in Section 10 Appendix 1: Wildlife and Plant Inventory. State or federal threatened, endangered, fully protected, or candidate species recorded within the past ten years are described below.

Western Burrowing Owl

Western burrowing owl (*Athene cunicularia hypugaea*) is a candidate species for being listed as threatened or endangered under the California Endangered Species Act (CDFW 2024c). The western burrowing owl is a small bird of prey that is found in dry, flat, and open habitat with sparse or short vegetation. They nest in underground burrows previously excavated by other animals such as ground squirrels, badgers, and coyotes (Center for Biological Diversity et al. 2024). Burrowing owls eat rodents such as mice, pocket mice, and kangaroo rats. They nest in groups, forming "loose colonies" and have a nesting season from February-August, but many remain as year-long residents in California (Center for Biological Diversity et al. 2024).

Range wide, the western burrowing owl has "declined significantly throughout its range in North America" and "localized declines" have been reported in California since the early 1900s (Center for Biological Diversity et al. 2024). In the Park, burrowing owls have been seen incidentally during other Park surveys along SC262 and during the surveys done for the acquisition of the Park. It is likely that burrowing owls breed in the Park since a pair of adult burrowing owls and juveniles were seen at a burrow along Jawbone Canyon Road on BLM

property near the Park in 2012 during surveys done in preparation of the Acquisition EIR (TRA Environmental Services 2013).

Burrowing owls and their burrows are susceptible to OHV use, specifically there is a risk of their burrows being crushed. Preventing unauthorized OHV use in areas without designated trails can aid in protecting both the habitat and burrows used by the species. While not directly aimed at burrowing owls, Objective 1 found in Section 4.2.1 Conservation and Long-term Protection objectives will benefit burrowing owls by protecting their habitat and preventing damage to burrows by unauthorized OHV use.

Desert Tortoise

Desert tortoise (*Gopherus agassizii*) is federally listed as threatened and state listed as endangered (CDFW 2024a). The desert tortoise is one of most elusive inhabitants of the desert, spending up to 95% of its life underground. The desert tortoise lives in a variety of habitats from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where suitable soils for den construction might be found. They are found from near sea level to around 3,500 feet in elevation (USFWS 2014).

Desert tortoises may live 50 or more years in the wild. Their diet consists primarily of wildflowers, grasses, and cacti. A large urinary bladder can store over forty percent of the tortoise's body weight in water, urea, uric acid, and nitrogenous wastes. During periods of sufficient rainfall tortoises drink from temporary rain pools and then store water in their bladder to survive dry periods. Tortoises depend on bushes for shade and protection from predators such as ravens and coyotes. To escape the temperatures of cold winters and very hot summers, many tortoises live in burrows. They often share burrows and may use multiple burrows scattered across the landscape. They hibernate for up to nine months each year, becoming most active from March to June and September to October. When they are young, they seldom venture more than 150 feet from their burrow. As they get older, they may go as far as 3/4 mile in a day and use a network of burrows. More recent surveys done in the Western Mojave Recovery Unit in 2020 and 2021 found densities ranging from 1.7 tortoises per km^2 (0.7 tortoises per 100 acres) to 2.5 tortoises per km^2 (1 tortoise per 100 acres) (USFWS 2022a, USFWS 2022b).

There have been several more site-specific studies done in and around what is now Onyx SVRA and Red Rock Canyon State Park for tortoise density and death rates. A study in the Jawbone Butterbredt ACEC found densities in Red Rock Canyon watershed to be <9 tortoises per km^2 (Keith et al. 2008). The western portion of Red Rock Canyon State Park had densities of 2.7-2.57 tortoises per km^2 (Berry et al. 2008). A survey for desert tortoise in 2012 detected presence in the eastern parcels north of the Jawbone Canyon OHV Open Area where there is good habitat

and the rugged topography (badlands) limits OHV access. Areas dominated by blackbrush scrub were usually devoid of desert tortoise sign, although tortoises were observed in adjacent canyons where Mojave mixed woody scrub and/or creosote bush was dominant (Leatherman Bioconsulting, Inc. 2012). Tortoise abundance is higher in areas with more protection (i.e. tortoise friendly fencing, limited vehicle use, and restrictions on grazing) (Berry et al. 2014). The Acquisition EIR noted that OHV impacts to desert tortoise within the Park are significant and unavoidable.

Golden Eagle

The golden eagle (*Aquila chrysaetos)* is listed as state fully protected (CDFW 2017). The Department of Fish and Wildlife may not issue a permit that authorizes "take" of fully protected species, except for scientific research or via a Natural Communities Conservation Plan. Take is defined as "an action to or attempt to hunt, pursue, catch, capture, or kill" (Fish & Game Code § 86). Because this definition does not include harm or harass, habitat modification is not prohibited.

Golden eagles live in open and semi-open country featuring native vegetation across most of the northern hemisphere. They avoid developed areas and uninterrupted stretches of forest. They are found primarily in mountains up to 12,000 feet, canyonlands, grasslands, rimrock terrain, and riverside cliffs and bluffs. Golden eagles nest on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas. Most golden eagles in California are resident, but some migrate into California for winter. Those that migrate return to their breeding grounds in Canada and Alaska in the spring (Bedrosian et al. 2018). Those that stay yearlong may move downslope for the winter or upslope after breeding season (Kochert 2002).

The golden eagle breeds from late January through August and produces 1-3 eggs. Golden eagles usually nest on cliffs. They may also build nests in trees, on the ground, or in human-made structures, including windmills, observation towers, nesting platforms, and electrical transmission towers. Constructed near hunting grounds, golden eagle nests often command a wide view of their surroundings. Golden eagles prey mainly on small to medium-sized mammals, including hares, rabbits, ground squirrels, prairie dogs, and marmots. Black-tailed jackrabbits are a key prey species throughout much of their range. These eagles are also capable of taking larger bird and mammal prey. Golden eagles often feed on carrion, following crows and other scavengers to a meal (Kochert 2002). This species is often seen soaring in Kelso Valley and the northern parcels of the Park.

Mohave Ground Squirrel

Mohave ground squirrel (*Xerospermophilus mohavensis*) is state listed as threatened and has a pending federal petition to list it as threatened (CDFW 2017,Defenders et al. 2023). The Mohave Ground Squirrel Conservation Strategy discussed in Section 2.1.6 guides the management for this species. They inhabit desert areas with deep sandy or gravelly friable soils on flat terrain within the following plant communities: (1) creosote bush association, (2) shadscale association, (3) alkali sink association, and (4) Joshua tree association. Nests are in underground burrows and individuals may use several different burrows. Population size fluctuates with environmental conditions and in marginal habitats may become extirpated during extended droughts (Roach and Naylor 2016). Reproduction does not occur during dry years which allows several dry years to contribute to population declines (CDFW 2019).

Mohave ground squirrels feed on green vegetation and seeds but may also eat carrion. They remain underground from August until late winter or early spring and then become active during the spring and summer. The biggest threat to Mohave ground squirrel is habitat loss and fragmentation.

A survey done for the acquisition EIR conducted live-trapping for Mohave ground squirrel in potential habitat within Onyx SVRA. Mohave ground squirrels were found in 55.5% of the survey plots and were in “creosote scrub, mixed Mohave woody scrub, blackbrush scrub, and Joshua tree woodland” in the northeastern part of the SVRA as far west as Butterbredt Spring (Biosearch Associates 2012). While Kelso Valley is outside of the known range for the species, there is suitable habitat and Mohave ground squirrels are known to be in the adjacent canyon of Butterbredt spring (Biosearch Associates 2012). Surveys have also been done in the adjacent Red Rock Canyon State Park. CNDDB observations in Red Rock Canyon State Park date back to 1979 and show that there is suitable long-term habitat (Leitner 2008).

To remain updated on Mohave ground squirrel conservation, Environmental Scientists for Onyx SVRA attend the Mohave Ground Squirrel Technical Advisory Group meetings virtually or in person as scheduling allows. Information on monitoring for Mohave ground squirrels can be found in Section 6.3.1.

Peregrine Falcon

The peregrine falcon (*Falco peregrinus*) has been delisted but remains fully protected by CDFW. It is an uncommon resident and migrant in the Sierra Nevada. They breed in woodlands, forests, and along the coast. They do not build nests, but instead lay eggs on indentations along cliff sides, buildings, or bridges. The breeding season in California is from late February through June (CDFW 2022b). This species was recorded within the Park boundaries in 2020 on eBird.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is state listed as threatened. They breed and roost in large trees adjacent to grasslands, pastures, or grain fields. They are found in the Central Valley, Mojave Desert, and further north in California and Oregon. They feed on rodents, small mammals, amphibians, large insects, and occasionally fish. They are more often found near water but can nest in arid environments (Zeiner et al. 1988-1990). This species was confirmed within the Park in 2012 during the acquisition surveys. Since then, annual avian surveys have not detected Swainson's hawk, but the species was recorded on eBird at Butterbredt Spring in 2021.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is state listed as threatened. Tricolored blackbirds breed and forage near freshwater, often with emergent vegetation such as cattails. They also forage in grasslands and crop fields. They are usually a resident species in California and nest in thickets of cattails, willow, blackberry, and other tall herbaceous vegetation. They are colonial and nesting habitats need to be large enough to support the colony. This species usually does not migrate but does become nomadic in the fall in search of food. Their breeding season is from mid-April through late July (Zeiner et al.). Tricolored blackbirds are often seen at the stock ponds in Kelso Valley within the cattails.

Western Joshua Tree

The Western Joshua tree (*Yucca brevifolia*) is a state candidate species for listing as threatened and is additionally protected under the Western Joshua Tree Conservation Act. It is a woody evergreen plant ranging in height from 5-20m. Western Joshua trees spread both sexually and asexually through rhizomes. This species is found in southeastern California in the Mojave Desert and Great Basin Desert (CDFW 2022a). Joshua trees are common throughout Onyx SVRA, but the densest stands are along SC123 and within Kelso Valley.

Management actions to conserve and protect western Joshua trees in the Park align with the draft Western Joshua Tree Conservation Plan (CDFW 2024b). Joshua trees, along with any other special status species, are considered during the scoping phase and are discussed in the Project Evaluation Forms for all potential projects in the Park. Actions that can be done for specific projects in Joshua tree habitat include establishing avoidance buffers around individual western Joshua trees and minimizing impacts to western Joshua tree, its habitat, and its pollinators when avoidance is not possible. Additionally, the Park may consider accepting relocated western Joshua trees when appropriate and consistent with California State Parks (CSP) Department Operations Manual Policy 0310.4.1 on genetic integrity in revegetation and transplant effort; hosting range-wide monitoring plots for western Joshua tree, its pollinator,

and nurse plants; managing wildfire risk; and implementing habitat restoration or enhancement activities subject to fund availability. Any updates to the management of Joshua trees will be discussed in the Annual Report (see Section 7.2) or future WHPP updates.

Willow Flycatcher

The willow flycatcher (*Empidonax traillii*) is state listed as endangered. They are summer residents in the Sierra Nevada and Cascade Range in wet meadow and riparian habitats. At lower elevations, they are commonly migrants in the fall and spring. They nest and roost in dense willow thickets usually near water (Zeiner et al.). This species has been observed at Butterbredt Spring and was detected during our 2021 acoustic recording unit (ARU) surveys.

3.7 Non-native Invasive Species

Non-native and invasive species will be surveyed as part of the Early Detection and Rapid Response (EDRR) monitoring program discussed in Section 6. Current known invasive species include tree-of-heaven (*Ailanthus altissima*) and salt cedar or tamarisk (*Tamarisk* sp.). Tree-of-heaven is established in Kelso Valley at Mack Meadow Cabin and on BLM property adjacent to Butterbredt spring. Tamarisk has been identified along road SC262. Both species are addressed in Section 4.2.

3.8 Wildlife Movement

The Park's checkerboard pattern with other property owners and managers, such as BLM and private entities, has thus far kept wildlife corridors and movement open since these adjacent properties are not fenced off (see Figure 4). This allows free movement of species throughout the range, such as coyotes, badgers, bobcats, squirrels, tortoises and even the occasional bear that comes down from the Sierras. In addition, BLM has partnered with other agencies to develop the DRECP, which sets conservation goals for different types of desert habitat that overlap the Onyx SVRA area. One of the goals of the plan is to maintain wildlife corridors across the landscape, enabling wildlife (such as the desert tortoise), to move across the desert uninhibited, helping to maintain populations and support adaptation to a changing climate. The DRECP has wildlife corridors and linkages that connect three national parks, five national forests, three national monuments, and 70 BLM wilderness areas for the protection of sensitive plant and animal species such as the Mohave ground squirrel and desert tortoise.

3.9 Climate Change

The earth's climate is changing rapidly due to anthropogenic factors that result in increased greenhouse gas emissions, primarily carbon dioxide. The effects of climate change include long-term shifts in temperature and precipitation and increase the frequency and magnitude of

extreme weather events. Strategies to respond to climate change include mitigation and adaptation actions. Mitigation actions target the reduction of greenhouse gas emissions or their removal from the atmosphere. Adaptation actions target reducing the specific impacts caused by climate change on the landscape.

For vegetation and wildlife to successfully adapt, organisms require healthy, connected landscapes that allow shifts in behavior, distribution, and, on a longer timeframe, evolutionary processes to operate unimpeded (Chambers et al. 2019, Seavy et al. 2009). For organisms to respond to the rapid rate of climate change on an evolutionary level, they require a landscape that supports their biology and population dynamics (Bonnet et al. 2022).

The most important climate adaptation strategy for natural resource land managers is the recovery and protection of healthy, connected ecosystems (Seavy et al. 2009). Healthy ecosystems are more resilient to the short-term and long-term effects of climate change (Gunderson 2000, Scheffer et al. 2001). Ecosystems with high ecological connectivity (e.g., connectivity within a habitat type, between different ecotones, upstream/downstream through elevation gradients, horizontally on to floodplains) allow movement and resource exchange across the landscape.

The WHPP addresses climate adaptation for species and ecosystems through removing stressors and improving ecosystem connectivity, structure, and function. This will allow natural resources to more easily adapt to primary (e.g., changes in temperature, precipitation, river flow) and secondary (e.g., stream hydrology, fire) effects of climate change. The adaptive management approach of this WHPP provides the opportunity to understand the response of natural resources to changes in environmental conditions from climate change as well as changes in response to management through mitigation and adaptation actions.

4 Conservation and Improvement Goals and Objectives

4.1 WHPP Goals as defined by the Public Resource Code

The PRC provides the goals for this WHPP. Specifically, PRC §5090.35 I (1) calls for the Division to "…prepare a wildlife habitat protection plan that *conserves and improves* wildlife habitats for each state vehicular recreation area." Further, PRC §5090.10 defines "Conservation" and "conserve" as "…activities, practices, and programs that *protect and sustain* soils, plants, wildlife, habitats, and cultural resources". PRC §5090.11 defines "restoration" and "restore" to mean "upon closure of the unit or any portion thereof, the restoration of land to the contours, the plant communities, and the plant covers comparable to those on surrounding lands or at least those that existed prior to off-highway motor vehicle use."

Given the language provided by the PRC, the fundamental habitat goals of the WHPP are to provide for (CDPR 2021):

- the conservation or long-term protection of soils, plants, wildlife, and habitats
- the improvement or increase in the quality or extent (hereafter, "improvement") of soils, plants, wildlife, and habitats

4.2 WHPP Objectives

This section discusses the conservation and improvement objectives for Onyx SVRA, which stem directly from the two goals provided by the PRC (see Section 4.1). The PRC goals focus on four resource categories including soils, plants, wildlife, and habitats. Because these resource categories are interrelated, a single objective may target multiple categories. Objectives span the next five years and are informed by the natural resource assessments in Section 3. Objectives follow the S.M.A.R.T. format principles, meaning they are "specific", "measurable", "achievable/attainable", "realistic", and "timely" (CDPR 2021). Table 3 below summarizes the objectives and outlines the corresponding management actions and monitoring which will be described in Section 5 and Section 6.

4.2.1 Conservation and Long-term Protection Objectives

Resource Category: Soil/Habitat/Wildlife

Objective 1- Through 2029, conserve desert tortoise and Mohave ground squirrel habitat by preventing establishment of new unauthorized user-created trails in areas with desert tortoise and Mohave ground squirrel habitat in MU –3 - Trail Only Area.

S.M.A.R.T. Target(s):

1. Develop a S.M.A.R.T. Target by 2025 using baseline data collected in 2023 and 2024 during Trail Evaluations.

Mohave ground squirrels and desert tortoises are both special status species (see Section 3.6). Unauthorized OHV use has the potential to degrade habitat for desert tortoises and Mohave ground squirrels by denuding vegetation cover, compacting soil, and collapsing burrows. All but 46 acres of the entire 29,654 acres of MU 3 contain vegetation communities that are listed in the habitat descriptions of the target species on CNDDB (open desert scrub, desert wash, alkali scrub, and Joshua tree woodland). Preventing new off-trail OHV use within the entire MU 3 will conserve the habitat and soil conditions used by Mohave ground squirrels and desert tortoises. Baseline data collected in 2023 and 2024 will determine the number of unauthorized user-created trails in MU 3. A S.M.A.R.T. Target will be determined by 2025 using baseline data.

Resource Category: Vegetation/Habitat

Objective 2- Through 2029, continue to conserve Fremont Cottonwood Sensitive Natural Community in MU 3a – Butterbredt Spring and Wet Meadows Sensitive Natural Community and adjacent habitats in MU 2 – Mack Meadow Cabin by preventing establishment of new unauthorized user-created trails (Figures 22 and 23).

S.M.A.R.T. Target(s):

1. In MU 2- Mack Meadow Cabin, continue to conserve 900 acres of habitat including Wet Meadows, Fresh Emergent Wetland, Desert Scrub, Perennial Grasses and Forbs, Alkaline Mixed Scrub, Rabbitbrush, Annual Grasses and Forbs, California Juniper, and Desert Buckwheat (baseline zero unauthorized user-created trails).

2. In MU3a- Butterbredt Spring, continue to conserve 2.4 acres of Fremont Cottonwood (baseline zero unauthorized user-created trails).

VegCAMP, described in Section 3.4, evaluates vegetation alliances to assign them global and state rarity ranks. These alliances, also known as natural communities, are ranked at the state level from one (very rare) to five (stable). Alliances with a state rank one, two, or three are Sensitive Natural Communities. Both Wet Meadow and Freemont Cottonwood are ranked on the state level as two. Baseline acreage was calculated using VegCAMP surveying and mapping done during the Natural Resource Assessment. These communities are currently fenced off from OHV recreation in MU 2- Mack Meadow Cabin and MU 3a- Butterbredt Spring. Continued conservation of these communities by maintaining vehicular exclusionary fencing will help maintain these vegetation and habitat resources within the Park. Target parameters were chosen to conserve the existing baseline acreage condition in areas already fenced off from

undesignated vehicular access. The targets are reasonably feasible within the timeframe, staffing, and funding availability.

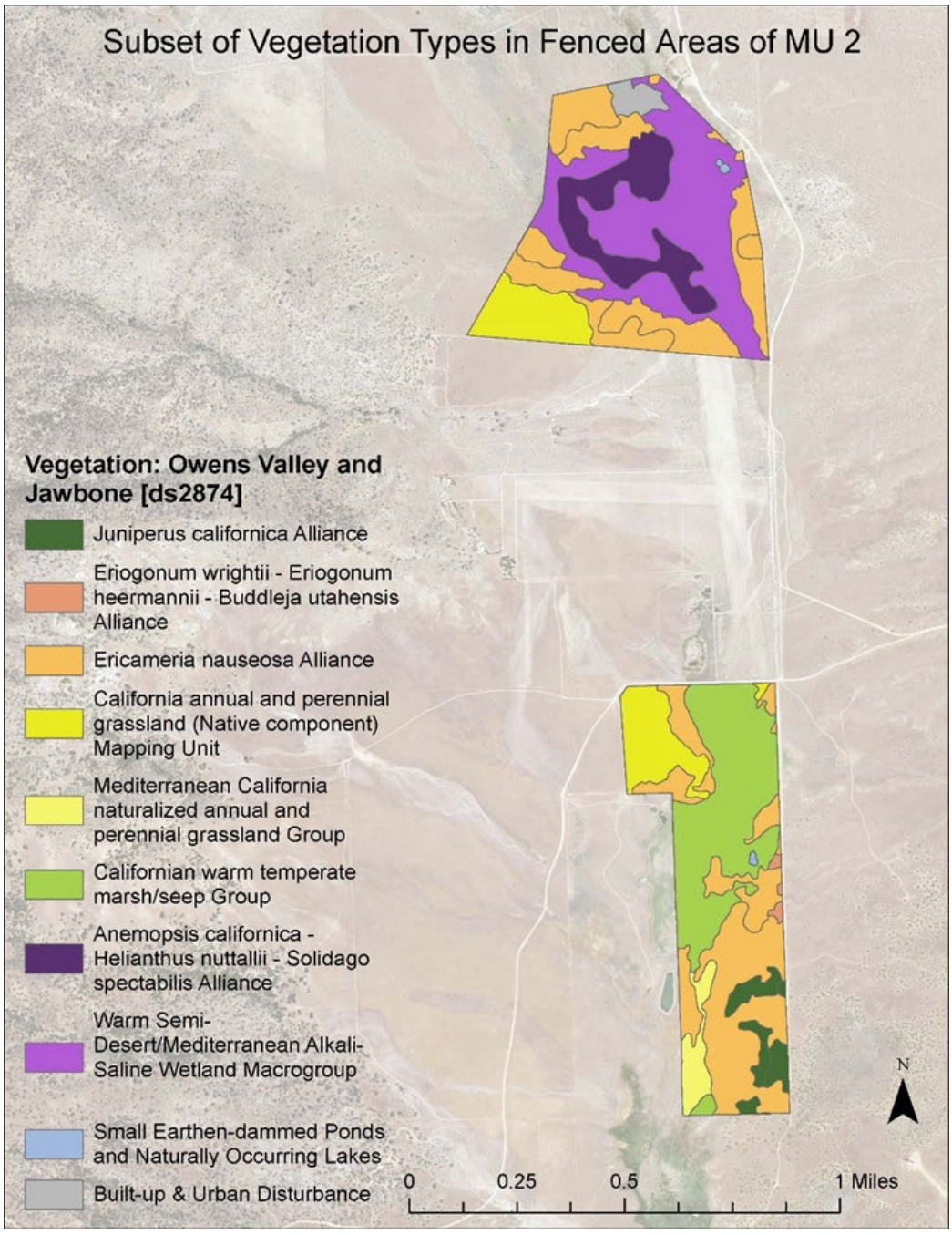


Figure 22. Map showing the vegetations types in the fenced areas of MU 2- Mack Meadow Cabin.

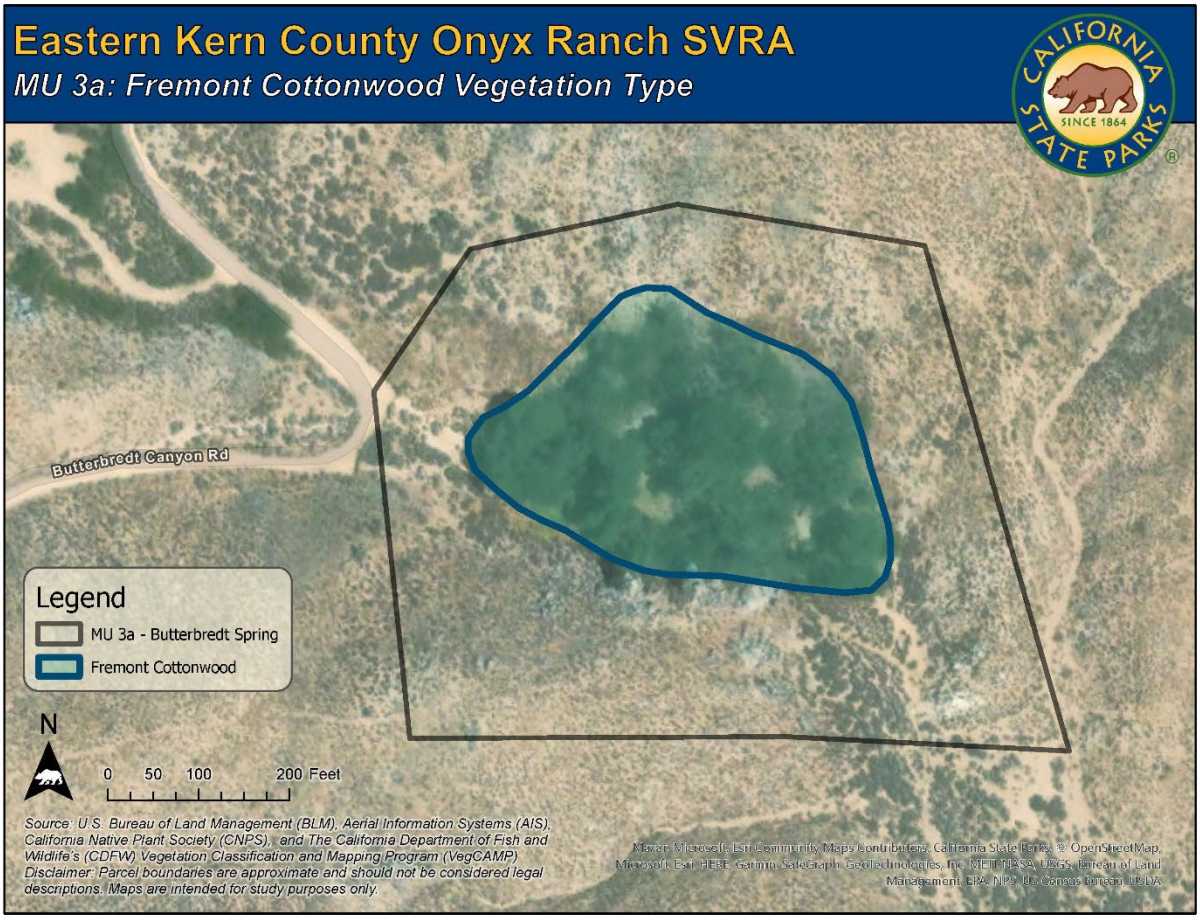


Figure 23. Map showing the 2.4 acres of Freemont Cottonwood within the fenced area pf MU 3a- Butterbredt Spring.

Resource Category: Vegetation

Objective 3- Through 2029, maintain absence of tree of heaven (*Ailanthus altissima*) at Butterbredt Spring in MU 3a- Butterbredt Spring.

S.M.A.R.T. Target(s):

1. Zero tree of heaven trees within MU 3a- Butterbredt Spring (baseline zero trees).

Tree of heaven is an invasive and non-native species that spreads through seeds and sprouts from the roots. There is an established stand of tree of heaven adjacent to Butterbredt Spring on BLM land. We continue to work with BLM on a collaborative approach to managing the tree of heaven. Maintaining an absence of tree of heaven within Butterbredt Spring is important to prevent the spread of this invasive species into the desert riparian habitat. Baseline was established using photo monitoring and visual surveys. The target parameter was chosen to conserve the existing baseline condition and prevent tree of heaven establishment in MU 3a- Butterbredt Spring. The target is reasonably feasible within the timeframe, staffing, and funding availability.

Resource Category: Vegetation / Habitat

Objective 4- Through 2029, ensure rangeland health standards are being met and proper use factors are not exceeded.

S.M.A.R.T. Target(s):

1. Meet health standards for the following categories: soils, species, riparian, and water quality (baseline to be determined in 2025).

2. Ensure proper use factors (maximum utilization levels) of forage are not exceeded (baseline to be determined in 2025).

Cattle grazing can impact the natural resources throughout the Park. The Acquisition EIR for the Park states that the OHMVRD will monitor forage conditions annually and perform Rangeland Health Assessments using the BLM protocols. Annual Rangeland Health Assessments will evaluate whether standards are being met for soils, species, riparian, and water quality, ensuring that grazing is not negatively impacting the environment. By incorporating special status species, native plants, soil health, riparian diversity, and water quality, these standards ensure that habitat, biodiversity, and ecosystem health are conserved in grazed areas, including MU 2 Mack Meadow Cabin area discussed in Objective 2 and other areas grazed throughout the Park. More information on the standards can be found on the sixth page of the Rangeland Health Assessment form in Section 12 Appendix 3. Additionally, proper use factors are set and

monitored to ensure overgrazing does not occur. Target parameters were chosen based on the grazing lease (CDPR 2013) and the BLM Rangeland Health Assessments (BLM 2000). Previous surveys and baseline information for adjacent BLM lands is not available so baseline information for the Park will be determined in 2025.

4.2.2 Improvement Objectives

Resource Category: Habitat/Wildlife

Objective 5- Reduce the extent of unauthorized user-created trails in creosote and bursage scrub habitat in MU 5- Onyx Campsites along road SC251.

S.M.A.R.T. Target(s):

1. Develop a S.M.A.R.T. Target by 2025 using baseline data collected in 2024.

MU 5 has many unauthorized trails near campsites that degrade creosote and bursage scrub habitat quality. These unauthorized trails damage the vegetation and habitat for wildlife. Decreasing the extent of unauthorized trails by vertical mulching and blocking access points can aid in the improvement of habitat in this area. Baseline data for the linear feet of trails will be determined using aerial imagery collected in 2024. Target will be determined by 2025 using baseline data.

Resource Category: Vegetation/Soil

Objective 6- Reduce the extent of tamarisk species throughout the Park.

S.M.A.R.T. Target(s):

1. No tamarisk throughout the Park by 2029 (baseline three tamarisk trees).

Tamarisk is an invasive, non-native species within Onyx SVRA. Tamarisk secretes salt into the soil, making the soil less favorable for native plant species. Tamarisk is not common within the Park but has been identified recently in MU 3. Removing Tamarisk is important to improve the native vegetation communities and prevent further soil salinization. Baseline was determined by incidental tamarisk observations in the Park. There may be additional tamarisk within the Park that have not been identified yet but will be surveyed for as part of the monitoring program. The target parameter was chosen to remove the tamarisk trees identified by the baseline. Target is feasible based on the current baseline, timeframe, staffing, and funding availability.

Resource Category: Habitat

Objective 7- Restore open water sources at Alphie and Butterbredt springs.

S.M.A.R.T. Target(s):

1. 10% open water at Alphie Spring and Butterbredt Spring by 2025 (baseline no open water).

Alphie Spring and Butterbredt Spring are important desert riparian habitats within the Park and provide water sources for wildlife in an otherwise dry environment. Cattail, *Typha latifolia*, is a native species but spreads aggressively in aquatic habitats. Left unmanaged, cattails fill in and dry out both Alphie and Butterbredt Spring. Open water benefits large mammal and bat species by providing a drinking source and provides a space for waterfowl to take off. Some cattail coverage is helpful for amphibian and nesting bird habitat. Maintaining a balance of cattails and open water habitat at these springs is important for the wildlife that frequent the area. Baseline was established by site visits in 2022 to both springs. Target was established to quantify the presence of open water needed to provide wildlife benefits and was set at an achievable level based on staffing. Target is feasible based on the timeframe, staffing, and funding availability.

Table 3. Summary of Onyx Ranch SVRA WHPP Goals and Objectives and their Associated Management Actions and Monitoring Programs.

Goal	Resource Category from PRC 5090.10	S.M.A.R.T. Objectives	Management Actions	Monitoring
Conserve	Soil, Habitat, Wildlife	Objective 1- Through 2029, prevent establishment of new unauthorized trails in areas with desert tortoise and Mohave ground squirrel habitat in MU 3- Trail Only Area.	Repair and install fence lines.	Annual Trail Evaluations.
Conserve	Vegetation, Habitat	Objective 2- Through 2029, continue to conserve Fremont Cottonwood Sensitive Natural Community in MU 2- Mack Meadow Cabin and Wet Meadows Sensitive Natural Community in MU 3a- Butterbredt Spring.	Maintain fence lines.	Annual Trail Evaluations.
Conserve	Vegetation	Objective 3- Through 2029, maintain absence of tree of heaven (*Ailanthus altissima*) in MU3a- Butterbredt Spring.	Remove sprouts or seedlings of tree of heaven. Continue to work with BLM on addressing the infestation.	Photo Monitoring twice a year.

Conserve	Vegetation, Habitat	Objective 4- Through 2029, ensure rangeland health standards are being met and proper use factors are achieved.	Maintain proper use factors for all key forage plants identified in the allotment.	Annual Rangeland Health Assessments. Forage Utilization Surveys during the spring growing season (3/1-5/31).
Improve	Habitat/Wildlife	Objective 5- Reduce the extent of unauthorized trails in creosote and bursage scrub habitat in MU 5-Onyx Campsites along road SC251.	Maintain and add barriers and vertically mulch areas.	Annual Unauthorized Trail Measurements.
Improve	Vegetation/Soil	Objective 6- Reduce the extent of *Tamarisk* throughout the Park.	Remove *Tamarisk* plants.	Annual Early Detection Rapid Response surveys.
Improve	Habitat	Objective 7- Restore open water sources at Alphie and Butterbredt springs.	Manually remove broadleaf cattail (*Typha latifolia*).	Photo Monitoring twice a year.

5 Management Actions

Management actions are responses that can be taken to improve habitat, reduce impacts to habitat, respond to triggers, and attempt to reach success criteria, all with the intention of moving toward habitat goals and objectives (CDPR 2020). These actions are informed by the Park's resource objectives, success criteria, and monitoring results (Table 3). For more detail on the management actions described below in Table 4 and for additional reasonably feasible management actions not listed here, see Section 11 Appendix 2.

Table 4. Summary of management actions and potential scheduling over the next five years.

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)
On-Going Natural Resource and Maintenance Activities	Prevention and naturalization of unauthorized and redundant trails through placement of rocks, signage, tortoise-friendly fencing, and/or vertical mulching.	Objectives 1, 2, 5	Through 2029	Continuously	MU 2- Mack Meadow Cabin, MU 3- Trail Only Area, MU 3a- Butterbredt Spring, and MU 5- Onyx Campsites.
On-Going Natural Resource and Maintenance Activities	Invasive species removal, including the manual and mechanical removal of tamarisk and tree of heaven.	Objectives 3, 6	Through 2029	September-January	MU 3- Trail Only Area along SC262 and MU 3a- Butterbredt Spring.
On-Going Natural Resource and Maintenance Activities	Maintenance of existing fence lines.	Objectives 1, 2, 5	Through 2029	Year-round	MU 6- Onyx SVRA.

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)
On-Going Natural Resource and Maintenance Activities	Hand-pulling of cattails.	Objective 7	Through 2029	September-January	Alphie Spring in MU 3- Trail Only Area and MU 3a - Butterbredt Spring.
On-Going Natural Resource and Maintenance Activities	Removal of livestock from a pasture.	Objective 4	Through 2029	Year-round	MU 6 – Onyx SVRA

6 Monitoring Program

The monitoring program for the Park is designed to provide periodic evaluation of the condition of resources and inform adaptive management within the SVRA. The Natural Resource Assessment (Section 3) is the initial assessment within the monitoring program. Monitoring related to conservation and improvement objectives are outlined below and include performance indicators for each resource category. Performance indicators are evaluated at regular intervals and the results are used in the adaptive management approach to inform future management of targeted resources. Additional monitoring within the Park that is not related to conservation and improvement objectives but provides useful information for park and species management is discussed in Section 6.3. Detailed monitoring protocols, including methods, uncertainties, maps, and data collection forms can be found in Section 12 Appendix 3.

6.1 Monitoring and Performance Indicators Related to Conservation Objectives

Trail Condition Evaluations

Trail Condition Evaluations are done as part of the Park's Soil Conservation Plan. Beginning in 2022, Trail Condition Evaluations, as described in Appendix 3 of the 2020 Soil Conservation Standard and Guidelines (CDPR 2020), will be systematically done over time to evaluate the initial condition of designated OHV trails in Onyx SVRA. Trail Condition Evaluations will collect data that will be used to create maps of trail conditions and water crossings in all MUs containing CDPR managed trails, specifically MUs 3-6. After the initial assessment of trail conditions is done in 2022, Trail Condition Evaluations will be repeated annually.

Trail Condition Evaluations will be done digitally using ArcGIS Field Maps. Within Field Maps, monitoring personnel will enter the same information collected in the Trail Condition Evaluation Form found in Section 12 Appendix 3. CDPR managed trails will be broken down into trail sections. Trail sections will be rated green, yellow, or red for trail conditions and sustainability. Ratings will be based on the information collected during the evaluations, such as slope, watercourse crossings, drainage features and function, and erosion condition. The data collected in Field Maps will be used to make a map of the trail conditions throughout the Park with each section represented as green, yellow, or red. While the main focus of the initial evaluations performed in 2022 is on erosion and sedimentation, beginning in 2023, Trail Condition Evaluations will also collect point locations of where unauthorized trails intersect designated routes. Locations of unauthorized trails will be collected in all areas originally surveyed for Trail Condition Evaluations as well as for the fenced areas in MU 2- Mack Meadow Cabin. This data will be used to create a map of and determine the number of unauthorized trail intersections with designated routes. More detailed protocols for Trail Condition Evaluations can be found in Section 12 Appendix 3.

Objective 1- Through 2029, prevent establishment of new unauthorized trails in areas with desert tortoise and Mohave ground squirrel habitat in MU 3- Trail Only Area.

Metric- Number of unauthorized trails.

Baseline- To be determined by 2025 using data collected during Trail Condition Evaluations. Surveys began in 2023 and 2024.

Target- To be determined by 2025 using baseline data.

Objective 2- Through 2029, continue to conserve Fremont Cottonwood Sensitive Natural Community in MU 2 – Mack Meadow Cabin and Wet Meadows Sensitive Natural Community and adjacent habitats in MU 3a – Butterbredt Spring.

Metric- Number of unauthorized trails.

Baseline- Zero unauthorized trails within fenced areas of MU 2 – Mack Meadow Cabin and MU 3a – Butterbredt Spring.

Target- Zero unauthorized trails within fenced areas of MU 2 – Mack Meadow Cabin and MU 3a – Butterbredt Spring.

Photo Monitoring

This monitoring involves periodically taking photos in the same location and directions in order to compare and detect changes that occur over time. At all photo monitoring locations, photos are taken twice a year, and the photo monitoring form is filled out by staff. The form includes the location, bearing, date, time, camera type, and weather conditions. Detailed monitoring protocols, including a map of the monitoring locations and the form, can be found in Section 12 Appendix 3. This monitoring protocol can be used for multiple S.M.A.R.T. Targets. To monitor for Objective 3, photos will be taken at the boundary of BLM property and MU 3a- Butterbredt Spring. These photos will determine and document whether there are encroaching tree of heaven saplings onto state property.

Objective 3- Through 2029, maintain absence of tree of heaven (*Ailanthus altissima*) in MU 3a- Butterbredt Spring.

Metric- Presence of tree of heaven.

Baseline- Zero tree of heaven within MU 3a- Butterbredt Spring.

Target- Zero tree of heaven within MU 3a- Butterbredt Spring.

Rangeland Health Assessments

Rangeland Health Assessments will be done annually using the BLM protocol. The health assessments look at standards indicating rangeland health. Specifically, there is a standard for soils, species, riparian, and water quality. Each standard is assessed following the "Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management" (BLM 2000). Standards are rated into categories indicating if a standard is met, not met, and whether progress is being made. If standards are not met, management actions will be taken as outlined in the grazing lease (CDPR 2015a). More information on the standards can be found on the sixth page of the Rangeland Health Assessment form in Section 12 Appendix 3.

Objective 4- Through 2029, ensure rangeland health standards are being met and proper use factors are not exceeded.

Metric- Rangeland health standards.

Baseline- To be determined in spring 2025.

Target- Meet rangeland health standards for the categories: soils, species, riparian, and water quality.

Forage Utilization Surveys

Forage utilization is the percent by weight of the plant that is consumed or destroyed by animals (U.S. Department of Agriculture [USDA] et al. 1996). Proper use factors are the maximum utilization levels based on the current year's growth by weight, as measured during the growing season. Forage utilization surveys will be conducted in the spring growing season between March 1st and May 31st to determine if proper use factors are being met or exceeded. These proper use factors will be maintained for salt grass, sedges, rushes, willow, and cottonwood in the riparian areas of the grazing pastures. Where forage utilization levels reach or exceed these thresholds, livestock will be removed from the area or portions thereof and not be allowed to return for the remainder of the growing season (CDPR 2015a). Additional forage utilization surveys will be done outside of the spring growing season if pastures are grazed during the dormant season. More information on forage utilization surveys can be found in Section 12 Appendix 3: Monitoring Methodology.

Objective 4- Through 2029, ensure rangeland health standards are being met and proper use factors are achieved.

Metric- Maximum utilization levels.

Baseline- To be determined in 2025.

Target- Maximum utilization levels in riparian areas not to exceed 30% each for salt grass, sedge, and rushes; 10% each for willow and cottonwood. Utilization levels not to exceed 40% for key perennial species in the Mojave Desert for pastures grazed during the dormant season.

6.2 Monitoring and Performance Indicators Related to Improvement Objectives

Unauthorized Trail Measurements

This monitoring measures the linear feet of trails within target areas using either recent aerial imagery or ground-based assessments. Aerial imagery can be accessed on an as needed basis through drone surveys or through biennial National Agriculture Imagery Program (NAIP). Aerial imagery is used to determine the location and length of unauthorized trails. When recent aerial imagery is not available and drone surveys are not feasible, field surveys will be done in target areas to measure the length of unauthorized trails. Field surveys involve walking the length of the unauthorized trails while tracking the path using a GPS connected device. The target area for Objective 4 is in MU 5- Onyx Campsites along SC251. Aerial imagery will be collected by drone in 2023 and analyzed to determine the baseline linear feet of existing unauthorized trails. Unauthorized trail measurements will be done every five years concurrent with the WHPP update.

Objective 5- Reduce the extent of unauthorized trails in creosote and bursage scrub habitat in MU 5- Onyx Campsites along road SC251.

Metric- Linear feet of unauthorized trails.

Baseline- To be determined by 2025 by analyzing aerial imagery collected in 2024.

Target- Develop a S.M.A.R.T. Target by 2025 using baseline data.

Early Detection Rapid Response (EDRR)

The EDRR pilot monitoring program was drafted in January 2023. Surveys began in 2024 to detect and respond to new invasive plant spread and propagation. A subset of trails are monitored annually in high-use areas, areas leading to sensitive habitats, and areas of previous invasive plant treatment. Field surveys involve walking or driving the routes and documenting occurrences of invasive species on the target species list. Since tamarisk is one of the target species of the EDRR program, occurrences are documented and addressed through a treatment strategy. If new invasive plant species are found in other areas of the park, such as grazed areas, they are added and addressed through the EDRR program. Detailed monitoring protocols, including routes to be surveyed and data collection, can be found in Section 13 Appendix 4.

Objective 6- Reduce the occurrence of tamarisk throughout the Park.

Metric- Number of tamarisk trees.

Baseline- 3 tamarisk trees identified in 2022.

Target- 0 tamarisk trees by 2029.

Photo Monitoring

Photo monitoring is described above in Section 6.1 and detailed protocols can be found in Section 12 Appendix 3. This monitoring can be used for multiple S.M.A.R.T. Targets. To monitor for Objective 6, photos will be at both spring locations twice a year. These photos will determine and document whether there is 10% open water present at each spring. Photo monitoring may also be done at the stock ponds in Kelso Valley to ensure that the current balance of cattails and open water is maintained. Should cattail management be needed at the ponds in Kelso Valley, these locations will be added to Objective 7.

Objective 7- Restore open water sources at Alphie and Butterbredt Springs.

Metric- Percent of open water.

Baseline- No open water.

Target- 10% open water.

6.3 Applied Scientific Research

Monitoring at Onyx SVRA that is not related to conservation and improvement objectives informs park managers with relevant information on the species in the Park. This monitoring includes studies on special-status species, such as the Mohave ground squirrel, the different HMS taxa groups, and cattle grazing in Kelso Valley. The monitoring in this section was developed to meet previous PRC guidelines but is still continued for the benefit of the Park.

6.3.1 Monitoring Related to Special-Status Species

Mohave Ground Squirrel Camera Trapping

Mohave ground squirrel monitoring provides helpful information to park managers and the CDFW Mohave Ground Squirrel Technical Advisory Group (MGS TAG) on the presence of this species throughout the Park. Survey protocols were developed in coordination with the MGS TAG and CDFW protocols (CDFW 2023). Similar camera surveys are done by the TAG throughout the species' range. A summary of the protocol used at Onyx SVRA is below, and a detailed protocol can be found in Section 12 Appendix 3.

Mohave ground squirrel camera trap monitoring is completed every other year between March 15th and July 15th. Cameras are installed for three sessions of five full days during each of three camera trapping periods (March 15th – April 30th, May 1st – May 31st, and June 1st -July 15th). Twenty total cameras are installed across four HMS plots in transects of five cameras. HMS plots used include plots 8, 7, 20, and 19. Cameras within the transects are spaced out 150 meters. Cameras are baited with four-way livestock grain to attract Mohave ground squirrels to the camera view. The photos are reviewed, and the number of Mohave ground squirrel photo occurrences are recorded.

Desert Tortoise Monitoring

Surveying in Onyx SVRA began in late 2024 and will continue into 2025 as part of a larger study on desert tortoise demographics on public and state lands in the western Mojave Desert. In the western Mojave Desert, the state and federally listed Agassiz's desert tortoise (*Gopherus agassizii*) is found on lands managed by State Parks and by the Bureau of Land Management. Both agencies support OHV recreation in portions of the western Mojave Desert. Multiple stressors are known to impact desert tortoise and its habitat, including OHV recreation, but the importance of these impacts on populations at the landscape level is not well understood.

Desert tortoise densities, as reported by the US Fish and Wildlife Service, are declining and are below minimum viable density in western Mojave Desert critical habitat units. However, limited region-wide data exists on the causes of these declines and the relative contribution of different anthropogenic activities.

Given the reported declines in desert tortoise densities, it is important for the OHVMRD to understand and quantify the impact OHV use has on the species and its habitat, while gathering baseline data in lands that State Parks manages.

Specifically – this monitoring program, over the next three years (2024-2026), will:

- Establish tortoise ranges within State Parks managed lands
- Estimate tortoise densities, populations, mortality rates, causes of mortality, and determine health
- Determine burrow locations
- Quantify types and conditions of habitat in sampled areas
- Identify the stressors acting on the species – and how the impact of OHV recreation fits into that; energy development, fires (secondary effects of climate); adult mortality vs. reproductive failure – mode of impact.

Since Onyx SVRA is only part of a larger survey effort, data will only be collected for one year within the Park as a subset of the three-year OHMVRD study. Data analysis will be done on the survey results as a whole and may not be specific to the Park. More information on the monitoring protocol can be found in Section 12 Appendix 3: Monitoring Methodology.

6.3.2 Inventory Update and Habitat Monitoring System (HMS) Taxa Monitoring

Annual taxa monitoring provides data used to update the PRC-required wildlife and native plant inventories (see Sections 3.2 and 3.3) and provides a deeper understanding of wildlife and vegetation populations at Onyx SVRA for park managers. Twenty-one HMS plots are surveyed throughout the Park in both trail and non-trail areas. Detailed information on plot selection can be found in Section 12 Appendix 3. The incidence of monitoring varies by taxa depending on monitoring needs and the level of effort required. Vegetation and reptile surveys are done annually. Small mammal monitoring is done annually at half of the monitoring plots, with plots rotating between years so each plot is monitored every two years. Avian and acoustic bat monitoring are done twice annually. Detailed protocols can be found in Section 12 Appendix 3.

6.3.3 VegCAMP

This monitoring measures the presence and extent in acres of specific vegetation community cover within the Park using the VegCAMP surveying and mapping classification (See Section 12 Appendix 3 for methodology). Baseline presence and acreage were determined using the 2013-2022 data discussed in Section 3.4. The information obtained from these surveys is intended to provide a baseline spatial inventory for vegetation communities throughout the Park, provide information about wildlife habitat, and inform management decisions regarding conservation, improvement, monitoring needs, invasive species management, and other management needs and goals. Subsequent VegCAMP surveys will be done every five years to help resources managers assess the effectiveness of management techniques, including improvement and invasive plant species treatments, and whether WHPP goals and objectives regarding the management of plant communities have been met. Results of monitoring and potential adaptive management decisions will be included in the Annual Report.

7 Evaluate and Adapt

Natural resource management decisions are guided by adaptive management. Each year's management and monitoring results are evaluated in the Annual WHPP Report (see section 7.2). The outcomes of monitoring and management actions guide the next year's WHPP projects and monitoring program. This section discusses the process for implementing adaptive management decisions, the chain of command for implementation, and the Annual WHPP Report guidelines.

7.1 Adaptive Management Decisions

Many adaptive management decisions are relatively straightforward changes to resource management activities or treatments approved and undertaken by program staff within afforded authorities. Others require changes to operational decisions, require additional resources, or include other factors which require SVRA management to be informed and engaged in assessing alternatives to address mandates. Thus, the approval process of decisions that grow out of adaptive management processes will necessarily engage a slightly different chain of command depending on the situation.

7.1.1 Chain of Command

The Great Basin District uses the Department Standard District Structure identified in Department Operations Manual 0202. Within park Operations, the district falls under the Desert Field Division. However, aspects of district managed SVRAs, such as review and approval of the WHPP, also fall under the jurisdiction of OHMVRD and NRD. A District Superintendent is responsible for the district operations, and a core team of program managers is responsible for their respective programs. Core district programs include administrative services, facilities management, interpretation and education, public safety, and natural resources. While program managers are tied to specific disciplines and programs, it is important for cross-discipline and matrix management to occur as no program exists solely independent of others.

For the purposes of the WHPP, the district's resources department will primarily be responsible for implementation, although other district programmatic efforts will be required. For example, certain management actions call for the use of interpretive signage, which would be executed in conjunction with the interpretation program. Additionally, the district's core team will be part of the district approval process of the WHPP.

7.1.2 Approval for WHPP-Identified Management Actions

As management actions included in the WHPP have previously been reviewed by the district, OHMVRD, and NRD, implementation of any adaptive management strategy identified in the

WHPP is to be approved by the district's Resource Program Manager and reported to the District Superintendent. Implemented management actions will be discussed in annual WHPP reports.

7.1.3 Approval for Modified or New Management Actions

The management actions presented within the WHPP offer a comprehensive overview of all the management actions currently being used to manage the SVRA's natural resources. The presented management actions may be expanded or modified, and new management actions may be developed based on monitoring results. Adaptive management actions not outlined and approved by the WHPP will follow a different process for review and implementation. Modified and new management actions are to be categorized as low-level or high-level, depending on the scale or level of change to the current WHPP, resources program, and park unit. Any modified or new management action would follow Department policies found within the Department Operations Manual or relevant Departmental Notices.

Low-level management actions can be performed with little to no impact on the SVRA's recreation or WHPP. Implementation of low-level management actions is to be approved by the district's Resource Program Manager and reported to the District Superintendent. Additionally, low-level management actions would be reported in the annual WHPP report. The use of low-level management actions allows for resources staff to act and respond quickly to changes in the adaptive management strategies of their parks. Examples of low-level actions include closing a gate or removing incipient invasive plants.

High-level management actions are adaptive management decisions that require more thought, approval, and implementation and that may negatively impact the Park's recreation activities or result in broader changes to the current WHPP. High-level management decisions will require the approval of the district's Resource Program Manager and District Superintendent. These management decisions should be reported to OHMVRD and NRD and included in the WHPP annual report. Examples of high-level management decisions include closing sections of the SVRA for restoration or starting a new management program (e.g., grazing, controlled burn, etc.).

7.2 Annual WHPP Report

Annual WHPP Reports will be used to capture the full natural resources program over the previous year, including adaptive management decisions, project implementation, and monitoring results. Annual WHPP Reports serve as a review of the application of the habitat management strategy and adaptive management approach of the SVRA.

Reports at minimum will include the following:

- The resources goals and objectives for the prior year.
- An analysis and review of the results of the prior year's monitoring data.
- The SVRA's management triggers from the prior year.
- All management action decisions that were implemented during the past year and a review of their level of success and ability to inform management decisions.
- Plans, goals, and objectives for monitoring and management within the coming year.

7.2.1 Report Review Process

WHPP Annual Reports are to be reviewed at many different levels within State Parks' Chain of Command. These levels include SVRA, District, Division, and Department. After review at the SVRA and District levels, WHPP Annual Reports are to be sent to OHMVRD and NRD technical team staff for review to determine if the goals and objectives established by the SVRA's 2025 WHPP are being met.

WHPP Annual Reports will be submitted annually to OHMVRD and NRD resources staff following the review process defined above. Report generation, Program review, and District review should be completed annually with final reports submitted to OHMVRD and NRD by March 31st, following the year to which the annual report applies.

8 Constraints

This section discusses the factors that may limit Onyx SVRA's staff's ability to accomplish the goals and objectives laid out in the WHPP. Factors constraining Onyx SVRA may include, but are not limited to, staffing, funding, stochastic events, annual weather cycles, and lack of a General Plan.

Staffing

Staffing at Onyx SVRA is extremely limited. As of 2025 there are two Environmental Scientists, one State Parks Peace Officer, and one natural resource Worker I. These positions experience a high rate of turnover and are not always filled. There are no maintenance staff or heavy equipment operators designated for Onyx SVRA. Projects often require use of district staff or contracting out.

Funding

Funding impacts staff's ability to implement projects, monitoring, and management actions by impacting the level of positions funded (as discussed in the staffing section above). Additionally, it impacts WHPP implementation through a lack of vehicles allotted to the Park staff. Onyx SVRA's Environmental Scientist positions were created without the associated vehicles for

navigating the Park. Staff must rely on borrowing vehicles from other parks within the district to navigate the Park. Often, staff cannot complete actions in different areas of the Park at the same time because there is only one vehicle available.

Stochastic Events

Stochastic (random) events are unpredictable events which may impact the land or draw resources which would otherwise be directed towards management. Examples of stochastic events which may occur within or nearby Onyx SVRA include wildfires and flooding.

Annual Weather Cycles

Onyx SVRA can have extremely variable weather cycles, with hot and dry summers and cold winters, with occasional snowfall. Projects dependent on certain weather conditions may be impacted by the annual weather cycle.

General Plan

Without an existing General Plan in place, park staff are limited in the type of projects and management actions that can be completed

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Appendices

10 Appendix 1: Wildlife and Plant Inventory

Table 5. Wildlife and Plant Inventory for Onyx Ranch SVRA.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Anaxyrus boreas	Western toad	Amphibians	None	None	N/A	None	N/A	N/A	High	Yes	Seen during 2022 surveys.
Batrachoseps robustus	Kern Plateau salamander	Amphibians	None	None	N/A	IUCN_NT-Near Threatened	Only in the semi-arid Kern Plateau and Scodie Mountains. Frequents Jeffery pine/red fir, lodgepole pine and riparian scrub.	Found under rocks, bark fragments, logs and within and under wet logs, especially in spring and seep areas.	None	No	Outside the range of this species and no nearby occurrences.
Batrachoseps simatus	Kern Canyon slender salamander	Amphibians	None	Threatened	N/A	IUCN_VU-Vulnerable | USFS_S-Sensitive	Only in the lower Kern River Canyon in valley-foothill hardwood, valley-foothill hardwood-conifer, and mixed chaparral.	Found under downed pine, oak and chaparral scrub logs, as well as under rocks and talus on steep, north-facing slopes.	None	No	Outside the range of this species and no nearby occurrences.
Batrachoseps stebbinsi	Tehachapi slender salamander	Amphibians	None	Threatened	N/A	BLM_S-Sensitive | IUCN_VU-Vulnerable	Valley-foothill hardwood-conifer and valley-foothill riparian in the Piute and Tehachapi mountains of Kern County.	Prefers wet talus slopes or log-strewn hillsides with a steep, north-facing exposure.	High	No	CNDDB record 6.5 miles away in 2012. Inaturalist sighting in Kelso Valley in 2012. Habitat within park.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Ensatina eschscholtzii croceater	Yellow-blotched salamander	Amphibians	None	None	N/A	BLM_S-Sensitive | CDFW_WL-Watch List | USFS_S-Sensitive	Forests and well-shaded canyons, as well as oak woodlands and old chaparral.	Needs surface objects, such as logs, boards, and rocks. Also needs old rodent burrows or other underground retreats.	Low	No	No occurrences adjacent to/within park boundaries. Potential habitat in Eastern parcels.
Pseudacris hypochondriaca hypochondriaca	Baja California treefrog	Amphibians	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Rana boylii	Foothill yellow-legged frog	Amphibians	None	Endangered	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Low	None	No occurrences adjacent to/within park boundaries. Potential habitat in Kelso Valley in water canyon creek.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Artemisiospiza belli belli	Bell's sparrow (aka Sage sparrow)	Birds	None	None	N/A	CDFW_WL-Watch List	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	High	Yes	Seen regularly in the Park.
Setophaga americana	Northern parula	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021.
Accipiter cooperii	Cooper's hawk	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High	Yes	Confirmed during 2012 Acquisition surveys.
Accipiter gentilis	Northern goshawk	Birds	None	None	Hi	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites.	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	Low	No	No CNDDB records nearby. Habitat is within park.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Accipiter striatus	Sharp-shinned hawk	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas.	North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.	High	Yes	eBird record in 2022.
Actitis macularius	Spotted sandpiper	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Aechmophorus clarkii	Clark's grebe	Birds	None	None	N/A	BCC	N/A	N/A	Low	No	Habitat within park.
Aeronautes saxatilis	White-throated swift	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Agelaius phoeniceus	Red-winged blackbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Agelaius tricolor	Tricolored blackbird	Birds	None	Threatened	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	High	Yes	Seen incidentally in 2022.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Alectoris chukar	Chukar	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Amphispiza bilineata	Black-throated sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Anas platyrhynchos	Mallard	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Andrea herodias	Great blue heron	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Anthus rubescens	American pipit	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Aphelocoma californica	California scrub-jay	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Aquila chrysaetos	Golden eagle	Birds	None	None	N/A	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | CDFW_WL-Watch List | IUCN_LC-Least Concern	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	High	Yes	Confirmed during 2012 Acquisition surveys.
Archilochus alexandri	Black-chinned hummingbird	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Seen in 2021 surveys.
Ardea alba	Great egret	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Arenaria melanocephala	Black turnstone	Birds	None	None	N/A	None	N/A	N/A	Low	No	Potential migrant stopover.

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Artemisiospiza nevadensis	Sagebrush sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Artemisiospiza sp.	Ball's/Sagebrush Sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Asio otus	Long-eared owl	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses.	Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	High	Yes	eBird record in 2020.
Athene cunicularia	Burrowing owl	Birds	None	Candidate as Threatened or Endangered	N/A	BLM_S-Sensitive | CDFW_SCE-State Candidate | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	High	Yes	Seen incidentally in 2020 surveys.
Auriparus flaviceps	Verdin	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Baeolophus inornatus	Oak titmouse	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bombycilla cedrorum	Cedar waxwing	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.

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Bubo virginianus	Great horned owl	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Buteo jamaicensis	Red-tailed hawk	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Buteo lagopus	Rough-legged hawk	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Buteo lineatus	Red-shouldered hawk	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Buteo regalis	Ferruginous hawk	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Moderate	No	Habitat within park.
Buteo swainsoni	Swainson's hawk	Birds	None	Threatened	N/A	BLM_S-Sensitive | IUCN_LC-Least Concern	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Butorides virescens	Green heron	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calidris minutilla	Least sandpiper	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021.
Callipepla californica	California quail	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Calypte anna	Anna's hummingbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Calypte costae	Costa's hummingbird	Birds	None	None	N/A	IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation	Desert riparian, desert and arid scrub foothill habitats.	N/A	High	Yes	Seen incidentally in 2022.
Campylorhynchus brunneicapillus	Cactus wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Cardellina canadensis	Canada warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Cardellina pusilla	Wilson's warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Cathartes aura	Turkey vulture	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Catharus guttatus	Hermit thrush	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Catharus ustulatus	Swainson's thrush	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Catherpes mexicanus	Canyon wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2020 surveys by park staff.
Chaetura vauxi	Vaux's swift	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Redwood, Douglas-fir, and other coniferous forests. Nests in large hollow trees and snags. Often nests in flocks.	Forages over most terrains and habitats but shows a preference for foraging over rivers and lakes.	High	Yes	Confirmed during 2012 Acquisition surveys.
Chamaea fasciata	Wrentit	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Charadrius montanus	Mountain plover	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms.	Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	Low	No	Potential habitat in grazed areas of Kelso Valley. Closest occurrence is 3.4 miles away in 2002.

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Charadrius nivosus nivosus	Western snowy plover	Birds	Threatened	None	N/A	CDFW_SSC-Species of Special Concern | NABCI_RWL-Red Watch List	Sandy beaches, salt pond levees and shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.	None	No	No habitat within park boundaries.
Charadrius vociferus	Killdeer	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Chlidonias niger	Black tern	Birds	None	None	N/A	CDFW_SSC-Species of Special ConcernIUCN_LC-Least ConcernUSFWS_BCC-Birds of Conservation Concern	Freshwater lakes, ponds, marshes and flooded ag fields. At coastal lagoons and estuaries during migration.	Breeding range reduced. Breeds primarily in Modoc Plateau region, with some breeding in Sacramento and San Joaquin valleys.	Low	No	No CNDDB records nearby. Possible migrant.
Chondestes grammacus	Lark sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Chordeiles acutipennis	Lesser nighthawk	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Circus hudsonius	Northern harrier	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Cistothorus palustris	Marsh wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2016.
Coccothraustes vespertinus	Evening grosbeak	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2012.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	Birds	Threatened	Endangered	N/A	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Low	No	eBird record in 2006.
Colaptes auratus	Northern flicker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Columba livia	Rock pigeon	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2017.
Contopus cooperi	Olive-sided flycatcher	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | NABCI_YWL-Yellow Watch List | USFWS_BCC-Birds of Conservation Concern	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir and lodgepole pine.	Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Contopus sordidulus	Western wood-peewee	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Corthylio calendula	Ruby-crowned kinglet	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Corvus brachyrhynchos	American crow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Corvus corax	Common raven	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Cyanocitta stelleri	Steller's jay	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cypseloides niger	Black swift	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFWS_BCC-Birds of Conservation Concern	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains.	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	High	Yes	Confirmed during 2012 acquisition surveys.
Dryobates nuttallii	Nuttall's woodpecker	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Dryobates pubescens	Downy woodpecker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.

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Dryobates scalaris	Ladder-backed woodpecker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Dryobates villosus	Hairy woodpecker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021.
Dumetella carolinensis	Gray catbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2002.
Egretta thula	Snowy egret	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2020.
Empidonax difficilis	Pacific-slope flycatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Empidonax hammondii	Hammond's flycatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Empidonax oberholseri	Dusky flycatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Empidonax traillii extimus	Southwestern Willow Flycatcher	Birds	None	None	N/A	BCC	Riparian woodlands in Southern California.	Riparian woodlands.	Low	No	No nearby occurrences, but potential habitat is within the Park.
Empidonax traillii	Willow flycatcher	Birds	None	Endangered	N/A	IUCN_LC-Least Concern | USFS_S-Sensitive	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2000-8000 ft elevation.	Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	High	Yes	Recorded in 2021 ARU survey.

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Empidonax wrightii	Gray flycatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Eremophila alpestris actia	California horned lark	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	Short-grass prairi“, "b”ld" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	High	Yes	Seen regularly in the Park.
Eremophila alpestris	Horned lark	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Euphagus cyanocephalus	Brewer's blackbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Falco columbarius	Merlin	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches.	Clumps of trees or windbreaks are required for roosting in open country.	High	Yes	eBird record in 2021.
Falco mexicanus	Prairie falcon	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Inhabits dry, open terrain, either level or hilly.	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Falco peregrinus	Peregrine falcon	Birds	Delisted	Delisted	N/A	CDF_S-Sensitive | CDFW_FP-Fully Protected	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.	High	Yes	eBird record in 2020.
Falco sparverius	American kestrel	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Fulica americana	American coot	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gallinago delicata	Wilson's snipe	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gallinula galeata	Common gallinule	Birds	None	None	N/A	None	N/A	N/A			eBird record in 1995.
Geococcyx californianus	Greater roadrunner	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Geothlypis formosa	Kentucky warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2020.
Geothlypis tolmiei	MacGillivary's warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Geothlypis trichas	Common yellowthroat	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.

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Gymnogyps californianus	California condor	Birds	Endangered	Endangered	N/A	CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_CR-Critically Endangered | NABCI_RWL-Red Watch List	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude.	Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Low	No	CNDDB record 36 miles away in 2013. Habitat within park.
Gymnorhinus cyanocephalus	Pinyon jay	Birds	None	None	N/A	BCC	N/A	N/A	High	No	eBird record in 2010.
Haemorhous cassinii	Cassin's finch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Haemorhous mexicanus	House finch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Haemorhous purpureus	Purple finch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Helmitheros vermivorum	Worm-eating warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2017.
Hirundo rustica	Barn swallow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Icteria virens	Yellow-breasted chat	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses.	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	High	Yes	Recorded in 2021 ARU survey.
Icterus bullockii	Bullock's oriole	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Icterus cucullatus	Hooded oriole	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Icterus galbula	Baltimore oriole	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2011. Possible migrant.
Icterus parisorum	Scott's oriole	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Icterus spurius	Orchard oriole	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2006. Possible migrant.
Ixoreus naevius	Varied thrush	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Junco hyemalis	Dark-eyed junco	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.

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Lanius ludovicianus	Loggerhead shrike	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes.	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	High	Yes	Seen regularly in the Park.
Larus californicus	California gull	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, lakes, etc.	Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.	Low	No	eBird record in 1988. Possible migrant.
Larus delawarensis	Ring-billed gull	Birds	None	None	N/A	None	N/A	N/A	Moderate	No	eBird record in 1977. Some habitat within park.
Leiothlypis celata	Orange-crowned warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Leiothlypis peregrina	Tennessee warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2020.
Leiothlypis ruficapilla	Nashville warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.

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Limnodromus griseus	Short-billed Dowitcher	Birds	None	None	N/A	None	N/A	N/A	Low	No	Potential migrant stopover.
Loxia curvirostra	Red crossbill	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Megaceryle alcyon	Belted kingfisher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2018.
Melanerpes formicivorus	Acorn woodpecker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Melanerpes lewis	Lewis' woodpecker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021.
Melospiza georgiana	Swamp sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2013.
Melospiza lincolnii	Lincoln's sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Melospiza melodia	Song sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Melozone crissalis	California towhee	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Mimus polyglottos	Northern mockingbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Mniotilta varia	Black-and-white warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2019.

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Molothrus ater	Brown-headed cowbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Myadestes townsendi	Townsend's solitaire	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Myiarchus cinerascens	Ash-throated flycatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Myiarchus tyrannulus	Brown-crested flycatcher	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern	Inhabits desert riparian areas along the Colorado River, as well as other desert oases and riparian areas NW to Victorville.	Requires riparian thickets, trees, snags, and shrubs for foraging perches, nesting cavities, and cover.	Low	No	Possible migrant.
Myioborus pictus	Painted redstart	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2013.
Numenius americanus	Long-billed curlew	Birds	None	None	N/A	CDFW_WL-Watch List | IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List	Breeds in upland shortgrass prairies and wet meadows in northeastern California.	Habitats on gravelly soils and gently rolling terrain are favored over others.	Low	No	Possible migrant.
Numenius phaeopus	Whimbrel	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2014.
Nycticorax nycticorax	Black-crowned night heron	Birds	None	None	N/A	None	N/A	N/A	Moderate	No	eBird record in 2011. Habitat within park.

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Oporornis agilis	Connecticut warbler	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2006. Potential migrant.
Oreortyx pictus	Mountain quail	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Oreoscoptes montanus	Sage thrasher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Oxyura jamaicensis	Ruddy duck	Birds	None	None	N/A	None	N/A	N/A	Moderate	No	eBird record in 1995. Habitat within park; potential migrant.
Pandion haliaetus	Osprey	Birds	None	None	N/A	CDF_S-Sensitive | CDFW_WL-Watch List | IUCN_LC-Least Concern	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	High	Yes	Confirmed during 2012 Acquisition surveys.
Parkesia noveboracensis	Northern waterthrush	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2019. Potential migrant.
Passer domesticus	House sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Passerculus sandwichensis	Savannah sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Passerella iliaca	Fox sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Passerina amoena	Lazuli bunting	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.

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Passerina caerulea	Blue grosbeak	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Passerina cyanea	Indigo bunting	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2019. Potential migrant.
Patagioenas fasciata	Band-tailed pigeon	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pelecanus erythrorhynchos	American white pelican	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Colonial nester on large interior lakes.	Nests on large lakes, providing safe roosting and breeding places in the form of well-sequestered islets.	High	Yes	Confirmed during 2012 Acquisition surveys.
Petrochelidon pyrrhonota	Cliff swallow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2020 ARU survey.
Peucaea carpalis	Rufous-winged Sparrow	Birds	None	None	N/A	BCC	N/A	N/A	None	No	Outside the range of this non-migratory species.
Phainopepla nitens	Phainopepla	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Phalaenoptilus nuttallii	Common poorwill	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.

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Phalaropus tricolor	Wilson's phalarope	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2002. Potential migrant.
Pheucticus ludovicianus	Rose-breasted grosbeak	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021.
Pheucticus melanocephalus	Black-headed grosbeak	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Pipilo chlorurus	Green-tailed towhee	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Pipilo maculatus	Spotted towhee	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Piranga ludoviciana	Western tanager	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Piranga rubra	Summer tanager	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts.	Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	High	Yes	eBird record in 2021.
Plegadis chihi	White-faced ibis	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Poecile gambeli	Mountain chickadee	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Polioptila caerulea	Blue-grey gnatcatcher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Pooecetes gramineus	Vesper sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2020 surveys by park staff.
Psaltriparus minimus	Bushtit	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Psiloscops flammeolus	Flammulated owl	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2011. Possible migrant.
Psittacula krameri	Rose-ringed parakeet	Birds	None	None	N/A	None	N/A	N/A		No	eBird record in 2003.
Pyrocephalus rubinus	Vermilion flycatcher	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas.	Nest in cottonwood, willow, mesquite, and other large desert riparian trees.	High	Yes	eBird record in 2015.
Quiscalus mexicanus	Great-tailed grackle	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Rallus limicola	Virginia rail	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2019.
Recurvirostra americana	American avocet	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2013.
Regulus satrapa	Golden-crowned kinglet	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2017.

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Riparia riparia	Bank swallow	Birds	None	Threatened	N/A	BLM_S-Sensitive | IUCN_LC-Least Concern	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	High	Yes	eBird record in 2015.
Salpinctes obsoletus	Rock wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Sayornis nigricans	Black pheobe	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sayornis saya	Say's pheobe	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Seiurus aurocapilla	Ovenbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2018.
Selasphorus calliope	Calliope hummingbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed incidentally in 2021 by park staff.
Selasphorus rufus	Rufous hummingbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Setophaga caerulescens	Black-throated blue warbler	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2004. Unlikely migrant.

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Setophaga castanea	Bay-breasted warbler	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2011. Unlikely migrant.
Setophaga citrina	Hooded warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Setophaga coronata	Yellow-rumped warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Setophaga dominica	Yellow-throated warbler	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2010. Potential migrant.
Setophaga fusca	Blackburnian warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Setophaga magnolia	Magnolia warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2016. Potential migrant.
Setophaga nigrescens	Black-throated gray warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Setophaga occidentalis	Hermit warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Setophaga palmarum	Palm warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2019. Potential migrant.

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Setophaga pensylvanica	Chestnut-sided warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Setophaga petechia	Yellow warbler	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	High	Yes	Recorded in 2020 ARU survey.
Setophaga ruticilla	American redstart	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021. Potential migrant.
Setophaga townsendi	Townsend's warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Sialia currucoides	Mountain bluebird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Sialia mexicana	Western bluebird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sitta canadensis	Red-breasted nuthatch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Sitta carolinensis	White-breasted nuthatch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Sitta pygmaea	Pygmy nuthatch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2016. Habitat within park.
Spatula cyanoptera	Cinnamon teal	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Sphyrapicus nuchalis	Red-naped sapsucker	Birds	None	None	N/A	None	N/A	N/A	High	No	eBird record in 2011. Habitat within park.
Sphyrapicus ruber	Red-breasted sapsucker	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021. Habitat within park.
Sphyrapicus thyroideus	Williamson's sapsucker	Birds	None	None	N/A	None	N/A	N/A	Moderate	No	Habitat within park and sightings nearby on eBird.
Spinus lawrencei	Lawrence's goldfinch	Birds	None	None	N/A	IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFWS_BCC-Birds of Conservation Concern	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding.	Closely associated with oaks.	High	Yes	Recorded in 2021 ARU survey.
Spinus pinus	Pine siskin	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed incidentally in 2021 by park staff.

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Spinus psaltria	Lesser goldfinch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Spinus tristis	American goldfinch	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Spizella atrogularis	Black-chinned sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2020 survey by park staff.
Spizella breweri	Brewer's sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Spizella pallida	Clay-colored sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2013. Potential migrant.
Spizella passerina	Chipping sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Stelgidopteryx serripennis	Northern rough-winged swallow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Streptopelia decaocto	Eurasian collared dove	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.

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Strix occidentalis occidentalis	California spotted owl	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure >40%.	Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.	Low	No	Habitat within park, but no CNDDB records nearby.
Sturnella neglecta	Western meadowlark	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Sturnus vulgaris	European starling	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Tachycineta bicolor	Tree swallow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Tachycineta thalassina	Violet-green swallow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Thryomanes bewickii	Bewick's wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.

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Toxostoma bendirei	Bendire's thrasher	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert.	Nests in cholla, yucca, palo verde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.	High	No	CNDDB observation in 1987 within park. Habitat throughout park.
Toxostoma crissale	Crissal thrasher	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Resident of southeastern deserts in desert riparian and desert wash habitats.	Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.	High	No	CNDDB observation in 1978 within park. Habitat throughout park.

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Toxostoma lecontei	Le Conte's thrasher	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats.	Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	High	Yes	Seen in 2021 surveys.
Toxostoma redivivum	California thrasher	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Tringa melanoleuca	Greater yellowlegs	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 1997. Potential migrant stopover.
Tringa semipalmata	Willet	Birds	None	None	N/A	None	N/A	N/A	Low	No	Potential migrant stopover.
Tringa solitaria	Solitary sandpiper	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2007. Potential migrant stopover.
Troglodytes aedon	House wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2022.
Troglodytes pacificus	Pacific wren	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2018.

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Turdus migratorius	American robin	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Tyrannus verticalis	Western kingbird	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Tyrannus vociferans	Cassin's kingbird	Birds	None	None	N/A	BCC	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tyto alba	Barn owl	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen incidentally in 2021.
Vermivora chrysoptera	Golden-winged warbler	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2023.
Vireo cassinii	Cassin's vireo	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Vireo flavifrons	Yellow-throated vireo	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2009 and iNaturalist recording in 2022.
Vireo gilvus	Warbling vireo	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Vireo griseus	White-eyed vireo	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 1992.
Vireo huttoni	Hutton's vireo	Birds	None	None	N/A	None	N/A	N/A	Moderate	No	eBird record in 2007. Habitat within park.
Vireo olivaceus	Red-eyed vireo	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2021. Possible migrant.

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Vireo plumbeus	Plumbeous vireo	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed during 2012 acquisition surveys.
Vireo vicinior	Gray vireo	Birds	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFS_S-Sensitive	Dry chaparral; west of desert, in chamise-dominated habitat; mountains of Mojave Desert, associated with juniper and Artemisia.	Forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.	Moderate	No	CNDDB record 7.2 miles away in 1977. Habitat within park boundary.
Xanthocephalus xanthocephalus	Yellow-headed blackbird	Birds	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	High	Yes	eBird record in 2022. Possible migrant.
Zenaida asiatica	White-winged dove	Birds	None	None	N/A	None	N/A	N/A	High	Yes	eBird record in 2013.
Zenaida macroura	Mourning dove	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Zonotrichia albicollis	White-throated sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.

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Zonotrichia atricapilla	Golden-crowned sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Recorded in 2021 ARU survey.
Zonotrichia leucophrys	White-crowned sparrow	Birds	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Zonotrichia querula	Harris's sparrow	Birds	None	None	N/A	None	N/A	N/A	Low	No	eBird record in 2003. Unlikely migrant.
Hypomesus transpacificus	Delta Smelt	Fishes	Threatened	Endangered	N/A	None	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay.	Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	None	No	No habitat within park boundary.
Bombus crotchii	Crotch bumble bee	Insects	None	None	N/A	None	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	High	Yes	CNDDB record within park in 2020. Habitat within park.
Bombus morrisoni	Morrison bumble bee	Insects	None	None	N/A	IUCN_VU-Vulnerable	From the Sierra-Cascade ranges eastward across the intermountain west.	Food plant genera include Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus.	Moderate	No	CNDDB record 5.5 miles away in 1982. Habitat within park.

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Ceratochrysis gracilis	Piute Mountains cuckoo wasp	Insects	None	None	N/A	None	Known only from the holotype female.	N/A	Low	No	CNDDB record 6.5 miles away in 1973. Not a lot known on species.
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	Insects	Threatened	None	N/A	None	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus mexicana).	Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown f“r "stres”ed" elderberries.	None	No	CNDDB record 11.8 miles away in 1991. No known occurrences of host plant within park.
Euphilotes glaucon comstocki	Comstock’s blue butterfly	Insects	None	None	N/A	None	Host plant is Eriogonum species.	N/A	Low	No	CNDDB record 5.9 miles away in 1977. Host species within park.
Plebulina emigdionis	San Emigdio blue butterfly	Insects	None	None	N/A	USFS_S-Sensitive	Found in desert canyons and along riverbeds in Inyo, Kern, Los Angeles, and San Bernardino counties.	Host plant is Atriplex canescens; maybe Lotus purshianus also.	Low	No	No nearby CNDDB records. Habitat is within park.
Speyeria egleis tehachapina	Tehachapi Mountain silverspot butterfly	Insects	None	None	N/A	USFS_S-Sensitive	Found only at elevations of 7,000 to 8,400 ft in the Tehachapi and Piute mountains in Kern County.	Viola purpurea is the presumed larval food plant.	High	No	Host plant is within park. No nearby CNDDB records.

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Danaus plexippus	Monarch Butterfly	Insects	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Ammospermophilus leucurus	White-tailed antelope ground squirrel	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Antrozous pallidus	Pallid bat	Mammals	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	High	Yes	Confirmed in 2019 MIG surveys.
Canis latrans	Coyote	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Chaetodipus californicus	California pocket mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Chaetodipus formosus	Long-tailed pocket mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Moderate	No	CNDDB record 0.6 miles away in 1945 and 2 miles away in 1993. Habitat is within park.

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Dipodomys deserti	Desert kangaroo rat	Mammals	None	None	N/A	None	N/A	N/A	Moderate	No	Habitat within park.
Dipodomys merriami	Merriam's kangaroo rat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Dipodomys microps	Great Basin kangaroo rat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Dipodomys panamintinus	Panamint kangaroo rat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2012 Acquisition Surveys
Eptesicus fuscus	Big brown bat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Erethizon dorsatum	North American porcupine	Mammals	None	None	N/A	IUCN_LC-Least Concern	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.	Low	No	No CNDDB records in Kern County. Potential habitat within park.
Euderma maculatum	Spotted bat	Mammals	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_H-High Priority	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests.	Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.	High	Yes	Confirmed in 2021 surveys.

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Eumops perotis californicus	Western mastiff bat	Mammals	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | WBWG_H-High Priority	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Moderate	No	Habitat within park.
Lasiurus blossevillii	Western red bat	Mammals	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_H-High Priority	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.	Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	High	Yes	Confirmed in 2019 MIG surveys.
Lasiurus cinereus	Hoary bat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Lepus californicus	Black-tailed jackrabbit	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Lynx rufus	Bobcat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Myotis californicus	California myotis	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Myotis ciliolabrum	Small-footed myotis	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Myotis evotis	Long-eared myotis	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Myotis thysanodes	Fringed myotis	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.

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Myotis volans	Long-legged myotis	Mammals	None	None	N/A	IUCN_LC-Least Concern | WBWG_H-High Priority	Most common in woodland and forest habitats above 4000 ft. Trees are important day roosts; caves and mines are night roosts.	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Moderate	No	CNDDB record 2 miles away in 1993.
Myotis yumanensis	Yuma myotis	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Neotamias speciosus speciosus	Lodgepole chipmunk	Mammals	None	None	N/A	None	Summits of isolated Piute, San Bernardino, and San Jacinto mountains. Usually found in open-canopy forests.	Habitat is usually lodgepole pine forests in the San Bernardino Mts and chinquapin slopes in the San Jacinto Mts.	Moderate	No	CNDDB record 1 mile away in 1967.
Neotoma lepida	Desert woodrat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Neotoma macrotis	Big-eared woodrat	Mammals	None	None	N/A	None	N/A	N/A	Moderate	No	Within potential species range.
Odocoileus hemionus	Mule deer	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Onychomys torridus	Southern grasshopper mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.

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Onychomys torridus tularensis	Tulare grasshopper mouse	Mammals	None	None	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley.	Diet almost exclusively composed of arthropods, therefore needs abundant supply of insects.	Low	No	CNDDB record 0.3 miles away in 1970.
Otospermophilus beecheyi	California ground squirrel	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2012 Acquisition Surveys
Parastrellus hesperus	Canyon bat (western pipistrelle)	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Pekania pennanti pop. 2	Fisher - southern Sierra Nevada ESU	Mammals	Endangered	Threatened	N/A	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Moderate	No	CNDDB record 4.7 miles away in 1991. Habitat within park.

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Perognathus inornatus	San Joaquin pocket mouse	Mammals	None	None	N/A	BLM_S-Sensitive | IUCN_LC-Least Concern	Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert.	Associated with fine-textured, sandy, friable soils.	None	No	Outside species elevation range.
Perognathus longimembris	Little pocket mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Perognathus mollipilosus xanthonotus	Yellow-eared pocket mouse	Mammals	None	None	N/A	BLM_S-Sensitive	Known only from four canyons in the Tehachapi Mountains, northeastern Kern County. Elevational range 4000-5300 ft.	Desert shrub and Joshua tree communities with scattered pinyon pines. Occupies underground burrow when inactive.	Moderate	No	CNDDB record within park in 1911. Habitat within park.
Perognathus parvus	Great Basin pocket mouse	Mammals	None	None	N/A	None	N/A	N/A	Moderate	No	Habitat within park.
Peromyscus crinitus	Canyon mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Peromyscus maniculatus	Deer mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Peromyscus truei	Pinyon mouse	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2012 Acquisition Surveys

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Procyon lotor	Northern raccoon	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2019 park staff surveys.
Sylvilagus audubonii	Desert cottontail	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Seen in 2021 surveys.
Tadarida brasiliensis	Mexican free-tailed bat	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2021 surveys.
Taxidea taxus	American badger	Mammals	None	None	N/A	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	High	Yes	Seen in 2021 surveys.
Thomomys bottae	Botta's pocket gopher	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2012 Acquisition Surveys
Ursus americanus	American black bear	Mammals	None	None	N/A	IUCN_LC-Least Concern	N/A	N/A	High	Yes	Confirmed in 2021 large mammal surveys by park staff.
Vulpes macrotis arsipus	Desert kit fox	Mammals	None	None	N/A	None	N/A	N/A	High	Yes	Confirmed in 2012 Acquisition Surveys

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Xerospermophilus mohavensis	Mohave ground squirrel	Mammals	Pending petition to list as threatened.	Threatened	N/A	BLM_S-Sensitive | IUCN_VU-Vulnerable	Open desert scrub, alkali scrub and Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mojave Desert.	Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.	High	Yes	Seen in 2021 MGS surveys.
Abies concolor	White fir	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Abronia pogonantha	Mohave sand verbena	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Acamptopappus sphaerocephalus	Goldenhead	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Acamptopappus sphaerocephalus* var. *hirtellus	Hairy godenhead	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Achillea millefolium	Yarrow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Acmispon argophyllus	Silver lotus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Acmispon strigosus	Strigose lotus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Acmispon wrangelianus	Chilean lotus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Agoseris heterophylla	Mountain dandelion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Agrostsis sp.	Bent grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ailanthus altissima	Tree of heaven	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Allium howellii var. howellii	Howell's onion	Plants	None	None	4.3	None	Valley and foothill grassland	Clay (sometimes), Serpentinite (sometimes)	Low	No	No nearby occurrences and outside of the elevation range.
Allium or Calochortus	Onion or Mariposa-lily	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Allium shevockii	Spanish Needle onion	Plants	None	None	1B.3	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Pinyon and juniper woodland, upper montane coniferous forest.	In soil pockets on rock outcrops and talus slopes; bulbs mostly on margins of outcrops. 910-2225 m.	High	No	CNDDB record 0.6 miles away from park boundary and habitat is within park.
Almutaster pauciflorus	Alkali marsh aster	Plants	None	None	2B.2	None	Meadow and seeps.	Alkaline. 60-765 m.	Low	No	No nearby occurrences and unlikely to occur.
Amaranthus sp.	Amaranthus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ambrosia acanthicarpa	Annual bursage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ambrosia dumosa	White bursage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ambrosia salsola	Burrobrush, cheesebush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ambrosia salsola* var. *salsola	Cheesebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Amsinckia intermedia	Common fiddleneck	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Amsinckia menziesii	Fiddleneck	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Amsinckia sp.	Fiddleneck	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Amsinckia tessellata	Bristly fiddleneck	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Amsinckia tessellata* var. *tessellata	Devil's lettuce	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Anaphalis margaritacea	Pearly everlasting	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Androsace elongata ssp. acuta	California androsace	Plants	None	None	4.2	SB_CalBG/RSABG; SB_USDA	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland	N/A	Low	No	No nearby occurrences. Habitat within park.

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Anemopsis californica	Yerba mansa	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Anisocoma acaulis	Scale bud	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Apium graveolens	Celery or smallage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Arceuthobium campylopodum	Pine dwarf mistletoe	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Arctostaphylos glauca	Bigberry manzanita	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Arctostaphylos patula	Green leaf manzanita	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Argemone munita	Prickly poppy	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Artemisia dracunculus	Tarragon	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Artemisia tridentata	Big sage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Asclepias californica	California milkweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Asclepias erosa	Desert milkweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Asclepias fascicularis	Narrow leaf milkweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Astragalus didymocarpus* var. *didymocarpus	Common dwarf milkvetch	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Astragalus lentiginosus* var. *variabili	Freckled milkvetch	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Astragalus pachypus* var. *pachypus	Thick pod milkvetch	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Astragalus sp.	Milkvetch	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Astragalus subvestitus	Kern County milkvetch	Plants	None	None	4.3	None	Great Basin scrub, Meadows and seeps, Pinyon and juniper woodland	Gravelly (sometimes), Sandy (sometimes)	Low	No	No CNDDB records in Kern County. Potential habitat within park.
Atriplex canescens* var. *canescens	Fourwing saltbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Atriplex confertifolia	Shadescale	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Atriplex hymenelytra	Desert holly	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Atriplex polycarpa	Allscale saltbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Avena barbata	Slender wild oat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Avena fatua	Wild oat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Baccharis salicifolia	Mule fat, Seep willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Baccharis sergiloides	Desert baccharis	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Baccharis sp.	Baccharis sp.	Plants	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the park.
Baileya multiradiata	Desert marigold	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2021 surveys by park staff and MIG botanist.
Bebbia juncea	Sweetbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Boechera pulchra	Beautiful rockcress	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Boechera sp.	Rockcress	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Brassica tournefortii	Saharan mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Brickellia californica	California brickellia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Brickellia desertorum	Desert brickellia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Brickellia microphylla	Little leaved brickellia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Brickellia sp.	Brickellia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bromus berteroanus	Chilean chess	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bromus carinatus var. carinatus	California brome	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bromus diandrus	Ripgut brome	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bromus hordeaceus	Soft chess	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Bromus madritensis ssp. rubens	Red brome	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Bromus sp.	Bromus sp.	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Bromus tectorum	Cheatgrass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calandrinia menziesii	Redmaids	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calochortus kennedyi* var. *kennedyi	Desert mariposa	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calochortus palmeri* var. *palmeri	Palmer's mariposa-lily	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Meadows and seeps, chaparral, lower montane coniferous forest.	Vernally moist places in yellow-pine forest, chaparral. 195-2530 m.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Calochortus striatus	Alkali mariposa-lily	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	N/A	N/A	High	Yes	Confirmed incidentally in 2021 by park staff and vetted by NRD botanist.
Calochortus venustus	Butterfly mariposa-lily	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calycoseris parryi	Yellow tackstem	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calyptridium monandrum	Common pussypaws	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Calystegia longipes	Piute morning glory	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Camissonia campestris	Field primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Camissonia integrifolia	Kern River evening-primrose	Plants	None	None	1B.3	None	Chaparral.	760-915 m.	High	Yes	BLM/Calflora record within park in 2020.

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Camissonia kernensis ssp. kernensis	Kern County evening-primrose	Plants	None	None	4.3	None	Chaparral, Joshua tr“e "woodl”nd", Pinyon and juniper woodland	Granitic, Gravelly (sometimes), Sandy (sometimes)	High	No	No CNDDB records, but habitat is within park.
Camissonia sp.	Primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Canbya candida	White pygmy-poppy	Plants	None	None	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland.	Gravelly, sandy, granitic places. 600-1460 m.	High	No	CNDDB record 3.9 miles away from park. Habitat within park.
Carex praegracilis	Field sedge	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Carex sp.	Sedge sp.	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Castilleja applegatei	Wavy leaf paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Castilleja applegatei ssp. martinii	Martin's paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Castilleja chromosa	Desert paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Castilleja foliolosa	Wooly paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition survey.
Castilleja minor ssp. spiralis	Lesser paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Castilleja plagiotoma	Mojave paintbrush	Plants	None	None	4.3	SB_CalBG/RSABG; USFS_S	Great Basin scrub, Joshua tr“e "woodl”nd", Lower montane coniferous forest, Pinyon and juniper woodland	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Castilleja sp.	Paintbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Caulanthus coulteri	Coulter's jewel flower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Caulanthus lasiophyllus	California mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Ceanothus cuneatus* var. *cuneatus	Wedgeleaf ceanothus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ceanothus leucodermis	Chaparral whitethorn	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ceanothus pauciflorus	Mojave ceanothus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Centrostegia thurberi	Red triangles	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cercocarpus betuloides* var. *betuloides	Birch leaf mountain mahogany	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cerocarpus sp.	Mountain mahogany	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chaenactis carphoclinia* var. *carphoclinia	Pebble pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chaenactis fremontii	Fremont pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Chaenactis macrantha	Mojave pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chaenactis sp.	Pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chaenactis stevioides	Esteve pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chaenactis xantiana	Fleshcolor pincushion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Chenopodium album	Lamb squaters	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chenopodium californicum	California goosefoot	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chorizanthe brevicornu	Brittle spine flower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Chorizanthe palmeri	Palmer's spineflower	Plants	None	None	4.2	None	Chaparral, Cismontane woodland, Valley and foothill grassland	Rocky, Serpentinite	Low	No	No CNDDB records nearby. Unlikely to occur.
Chorizanthe spinosa	Mojave spineflower	Plants	None	None	CRPR 4.2	None	Chenopod scrub, Mojavean desert scrub, Joshua tree woodland, playas.	Sometimes on alkaline soils. 6-1300 m.	High	Yes	Seen in 2022 surveys.
Chorizanthe watsonii	Watson's spineflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chrysothamnus viscidiflorus ssp. viscidiflorus	Sticky leaved rabbitbrush, yellow rabbitbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Chylismia brevipes	Yellow cups	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Chylismia claviformis	Brown eyed primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Chylismia claviformis ssp. claviformis	Brown eyes	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Cirsium arvense	Canada thistle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cirsium occidentale	Western thistle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cirsium sp.	Thistle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Clarkia xantiana ssp. parviflora	Kern Canyon clarkia	Plants	None	None	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	N/A	N/A	Low	No	Known occurrence 1.3 miles away in 1996. Potential habitat in Eastern parcels.
Claytonia parviflora ssp. grandiflora	Streambank spring beauty	Plants	None	None	4.2	None	N/A	N/A	High	No	Known CNPS occurrence in 2019 0.38 miles from SVRA. Potential habitat within park.
Claytonia peirsonii ssp. yorkii	York's spring beauty	Plants	None	None	1B.1	None	N/A	N/A	Low	No	Known CNDDB occurrence 4.9 miles away in 2015. Potential habitat in park.

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Clematis ligusticifolia	Creek clematis	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cleomella parviflora	Slender cleomella	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Coleogyne ramosissima	Blackbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cordylanthus rigidus ssp. brevibracteatus	Short-bracted bird's-beak	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest	Granitic, Openings	Moderate	No	No nearby occurrences, but habitat is within park.
Corethrogyne filaginifolia	Common sand aster	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Croton setiger	Dove weed, Turkey mullein	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha barbigera	Cearded cryptantha	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Cryptantha circumscissa	Western forget me not	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha circumscissa* var. *circumscissa	Cushion cryptantha	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha echinella	Prickly cryptantha	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha micrantha	Purple root cryptantha	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha nevadensis	Nevada forget me not	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha oxygona	Sharp nut cryptantha	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha pterocarya	Winget nut forget me not	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cryptantha sp.		Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Cryptantha utahensis	Scented forget me not	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cuscuta californica	California dodder	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cuscuta denticulata	Desert dodder	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cylindropuntia echinocarpa	Silver cholla	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Cymopterus deserticola	Desert cymopterus	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Joshua tree woodland, Mojavean desert scrub.	On fine to coarse, loose, sandy soil of flats in old dune areas with well-drained sand. 625-1220 m.	High	Yes	Confirmed during 2012 Acquisition surveys.
Cymopterus panamintensis	Panamint indian parsnip	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2021 surveys by park staff with MIG botanist.
Datura wrightii	Jimsonweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Deinandra arida	Red Rock tarplant	Plants	None	Rare	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Mojavean desert scrub.	Volcanic tuff; dry to moist sites where water has collected along ephemeral streams, and along road edges. 690-915 m.	None	No	CNDDB record 0.5 miles away from park boundary. No microhabitat within park. Unlikely to occur.
Deinandra mohavensis	Mojave tarplant	Plants	None	Endangered	1B.3	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Riparian scrub, coastal scrub, chaparral.	Low sand bars in river bed; mostly in riparian areas or in ephemeral grassy areas. 640-1645 m.	High	No	CNDDB occurrence 0.5 miles away. Habitat is within park.
Delphinium hansenii ssp. kernense	Kern larkspur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Delphinium inopinum	Unexpected larkspur	Plants	None	None	4.3	USFS_S-Sensitive	Upper montane coniferous forest.	On open rocky ridgetops; on metamorphics in red fir and western white pine forest. 1890-2800 m.	Moderate	No	CNDB record 5.5 miles away in 1992. Habitat within park.

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Delphinium parryi	San Bernandino larkspur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park surveys with MIG botanist.
Delphinium parryi ssp. parryi	San bernandino larkspur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	Plants	None	None	4.3	SB_CalBG/RSABG; SB_SBBG; USFS_S	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland		Moderate	No	No CNDDB occurrences, but CNPS occurrences are nearby and habitat is within the Park.
Delphinium purpusii	Rose-flowered larkspur	Plants	None	None	1B.3	BLM_S-Sensitive | USFS_S-Sensitive	Chaparral, cismontane woodland, pinyon and juniper woodland.	On shady rocky slopes; often on carbonates. 230-2135 m.	None	No	No CNDDB occurrences nearby. Unlikely to occur.
Delphinium sp.	Larkspur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Descurainia pinnata	Yellow tansy mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Descurainia sophia	Herb sophia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Diplacus aurantiacus	Sticky monkeyflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park surveys with MIG botanist.
Diplacus pictus	Calico monkeyflower	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleafed upland forest, cismontane woodland.	In bare ground around gooseberry bushes or around granite rock outcrops. 180-1280 m.	Low	No	No CNDDB occurrences nearby. Unlikely to occur.
Dipterostemon capitatus	Blue dicks	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Distichlis spicata	Salt grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Dudleya abramsii ssp. calcicola	limestone dudleya	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Pinyon and juniper woodland	Carbonate	Moderate	No	CNPS records nearby and habitat within park.
Dudleya lanceolata	Southern california dudleya, Lance leaf liveforever	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Echinocactus polycephalus	Cottontop cactus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eleocharis parishii	Parish's spike rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eleocharis quinqueflora	Fewflower spikerush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eleocharis sp.		Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Elymus elymoides* var. *elymoides	Squirrel tail	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Elymus multisetus	Big squirrel tail	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Elymus triticoides	Bearded wild rye	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Emmenanthe penduliflora* var. *penduliflora	Whispering bells	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Encelia actoni	Acton's encelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ephedra californica	Mormon tea	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Ephedra nevadensis	Nevada ephedra	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ephedra sp.		Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Ephedra viridis	Green ephedra	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Epilobium canum ssp. canum	California fuchsia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Equisetum sp.	Horsetail	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Eremalche exilis	White mallow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eremothera boothii ssp. desertorum	Booth's desert primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum densifolium	Giant woolly star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum densifolium ssp. mohavense	Perennial woolly star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum diffusum	Miniature woolly star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum pluriflorum	Many flowered eriastrum	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum sapphirinum	Sapphire eriastrum	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum signatum	Eriastrum	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Eriastrum sp.	Desert woolly star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriastrum sparsiflorum	Few-flowered eriastrum	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Cismontane woodland, Great Basin scrub, Joshua tr“e "woodl”nd", Mojavean desert scrub, Pinyon and juniper woodland	Granitic, Openings (usually), Sandy	Moderate	No	Calflora/California Botanical Garden record 0.19 miles away from park boundary in 2008. Habitat within park.
Eriastrum tracyi	Tracy’s eriastrum	Plants	None	Rare	3.2	USFS_S-Sensitive	Chaparral, cismontane woodland, valley and foothill grassland.	Gravelly shale or clay; often in open areas. 315-2400 m.	High	No	CNDDB record .15 miles away in 2012. Habitat within park.
Ericameria cooperi* var. *cooperi	Cooper goldenbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ericameria cuneata	Wedgeleaf goldenbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ericameria linearifolia	Linear leaved goldenbush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Ericameria nauseosa	Rubber rabbitbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ericameria paniculata	Blackstem rabbitbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ericameria teretifolia	Green rabbitbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erigeron foliosus	Fleabane	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erigeron foliosus* var. *foliosus	Thread stemmed fleabane	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erigeron foliosus* var. *hartwegii	Hartweg's feabane	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum baileyi* var. *baileyi	Bailey’s buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum brachyanthum	Yellow buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Eriogonum brachypodum	Parry's buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum breedlovei* var. *breedlovei	Breedlove's buckwheat	Plants	None	None	1B.2	USFS_S-Sensitive	Upper montane coniferous forest, pinyon and juniper woodland.	Often on limestone or dolomite soils. 2130-2550 m.	Low	No	CNDDB record 5.7 miles away in 2012.
Eriogonum clavatum	Hoover's buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum crocatum	Conejo buckwheat	Plants	None	CR	1B.2	SB_CalBG/RSABG	Chaparral, Coastal scrub, Valley and foothill grassland	Rocky	Low	No	No nearby CNDDB occurrences. Unlikely to occur.
Eriogonum davidsonii	Davidson buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum deflexum	Flat topped buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum fasciculatum	California buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park surveys with MIG botanist.

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Eriogonum fasciculatum* var. *polifolium	Eastern Mojave buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum gracile* var. *gracile	Slender buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum gracillimum	Rose and white buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum heermannii	Heerman buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum inflatum	Desert trumpet	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum inflatum* var. *inflatum	Desert trumpet	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum kennedyi* var. *pinicola	Kern buckwheat	Plants	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, pinyon and juniper woodland.	Open places on clay soil. 1645-1860 m.	Low	No	CNDDB record 5.3 miles away in 2012. Habitat within park.

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Eriogonum maculatum	Angle stemmed buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum nidularium	Whisk broom, Bird nest buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum nudum	Nude buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum nudum* var. *westonii	Weston's buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum plumatella	Flat topped buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum pusillum	Yellow turban	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum reniforme	Kidney leaf buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum roseum	Wand buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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***Eriogonum* sp.**	Buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum trichopes	Little desert buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum umbellatum	Sulphur buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum wrightii* var. *subscaposum	Wright's buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriogonum wrightii* var. *wrightii	Wright's buckwheat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriophyllum ambiguum	Annual woolly sunflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriophyllum ambiguum* var. *paleaceum	Annual woolly sunflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriophyllum confertiflorum* var. *confertiflorum	Golden yarrow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Eriophyllum lanatum* var. *obovatum	Southern sierra woolly sunflower	Plants	None	None	CRPR 4.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Lower montane coniferous forest, upper montane coniferous forest.	Sandy loam. 1114-2500 m.	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriophyllum mohavense	Barstow woolly sunflower	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture	Chenopod scrub, Mojavean desert scrub, desert playas.	Mostly in open, silty or sandy areas w/saltbush scrub, or creosote bush scrub. Barren ridges or margins of playas. 605-1290 m.	Low	No	CNDDB record 8 miles away in 2017. Habitat within park.
Eriophyllum pringlei	Pringle eriophyllum	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Eriophyllum* sp.**	Woolly sunflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eriophyllum wallacei	Woolly daisy	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erodium cicutarium	Redstem filaree	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Erysimum capitatum* var. *capitatum	Sanddune wallfower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erysimum capitatum* var. *purshii	Pu'sh's wallflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Erythanthe* sp.**	Monkeyflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erythranthe guttata	Yellow monkeyflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Erythranthe rhodopetra	Red Rock Canyon monkeyflower	Plants	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Mojavean desert scrub.	Sandy soils in washes derived from sedimentary rock of the Ricardo formation. 670-840 m.	Low	No	CNDDB record 0.7 miles away in Red Rock State Park in 2008. General habitat within park.

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Erythranthe shevockii	Kelso Creek monkeyflower	Plants	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Joshua tree woodland, pinyon and juniper woodland.	Mostly known from Joshua tree-xeric conifer woodland in the high desert, in loose, granitic sandy soil. 910-1375 m.	High	Yes	CNDDB record within park in 2020.
Erythranthe sierrae	Sierra Nevada monkeyflower	Plants	None	None	4.2	SB_CalBG/RSABG	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps	Granitic (usually), Gravelly (sometimes), Sandy (usually), Streambanks, Vernally Mesic	Low	No	No CNDDB records. Habitat is within park.
Eschscholzia californica	California poppy	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eschscholzia minutiflora	Coville's poppy	Plants	None	None	None	None	N/A	N/A	High	Yes	On Calflora list checked 12.28.20

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Eschscholzia minutiflora* ssp. *twisselmannii	Red Rock poppy	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture	Mojavean desert scrub.	Volcanic tuff; with Larrea, Lycium, Eriogonum, Isomeris, Hemizonia. 680-1235 m.	Low	No	CNDDB record 1.1 miles away in 2017. Microhabitat not in park.
Eschscholzia minutiflora* var. *minutiflora	Coville's poppy, Pygmy poppy	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eucnide urens	Desert bush nettle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Eucrypta chrysanthemifolia* var. *chrysanthemifolia	Common eucrypta	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Euphorbia albomarginata	Rattlesnake weed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Euphorbia micromera	Desert spurge	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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***Euphorbia* sp.**	Rattlesnake weed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Euphorbia vallis-mortae	Death Valley sandmat	Plants	None	None	4.2	SB_CalBG/RSABG	Mojavean desert scrub	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Festuca bromoides	Brome fescue	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Festuca microstachys	Fescue	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Festuca octoflora	Sixweeks grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Festuca perennis	Rye grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Festuca* sp.**	Fescue	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Forestiera pubescens	Desert olive	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Frangula californica* ssp. *tomentella	Hoary coffeeberry	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Frasera tubulosa	Coville's green-gentian	Plants	None	None	4.3	None	Lower montane coniferous forest, Upper montane coniferous forest	Granitic, Sandy	Low	No	No CNDDB records, but habitat is within park.
Fremontodendron californicum	California fremontia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Fritillaria pinetorum	Pine fritillary	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest	Granitic (sometimes), Metamorphic (sometimes)	Low	No	No CNDDB records, but habitat is within park.
Galium andrewsii	Phlox leaved bedstraw	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Galium angustifolium* ssp. *onycense	Onyx Peak bedstraw	Plants	None	None	1B.3	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, pinyon and juniper woodland.	Grows from under and between large granite rocks and outcrops with scattered grey pines and oaks. 820-2195 m.	Low	No	No nearby CNDDB records. Habitat within park.
Galium hallii	Nodding bedstraw	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Galium porrigens	Climbing bedstraw	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Galium* sp.**	Bedstraw	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Garrya flavescens	Ashy silk tassel	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Geranium californicum	California geranium	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gilia brecciarum	Small gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Gilia brecciarum* ssp. *neglecta	Nevada gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park staff surveys with MIG botanist.
Gilia cana	Showy gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park staff surveys with MIG botanist.
Gilia cana* ssp. *speciosa	Showy gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 park staff surveys with MIG botanist.
Gilia capitata	Blue field gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gilia interior	inland gilia	Plants	None	None	4.3	None	Cismontane woodland, Joshua tr“e "woodl”nd", Lower montane coniferous forest	Rocky	Low	No	No CNDDB records, but habitat is within park.
Gilia ochroleuca* ssp. *bizonata	Volcanic gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gilia scopulorum	Rock gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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***Gilia* sp.**	Gilia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Glycyrrhiza lepidota	Wild licorice	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Grayia spinosa	Hopsage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gutierrezia microcephala	Sticky snakeweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Gutierrezia sarothrae	Matchweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Heliotropium curassavicum	Alkali heliotrope	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hesperochiron californicus	California hesperochiron	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Hesperocyparis nevadensis	Piute cypress	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture	Closed-cone coniferous forest, chaparral, cismontane woodland, pinyon and juniper woodland.	On dry slopes; known from granodiorite, gabbro and limestone. 715-1585 m.	Low	No	CNDDB record 5 miles away in 1980. Habitat is within park.
Hesperoyucca whipplei	Chaparral yucca	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Heterotheca sessiliflora	Goldenaster	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Heterotheca shevockii	Shevock's goldenaster	Plants	None	None	1B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral, cismontane woodland.	Ditches, crevices, shallow sand. 240-735 m.	None	No	No CNDDB records nearby and outside the spec'es' range.
Hieracium horridum	Shaggy hawkweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hirschfeldia incana	Summer mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Holodiscus discolor	Oceanspray	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hordeum brachyantherum	Meadow barley	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hordeum marinum* ssp. *gussoneanum	Barley	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hordeum murinum* ssp. *leporinum	Farmer's foxtail	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hornungia procumbens	Prostrate hutchinsia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Hosackia crassifolia* var. *crassifolia	Broad leaved lotus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Iva axillaris	Poverty weed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Juncus balticus	Baltic rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Juncus bufonius* var. *bufonius	Toad rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Juncus mexicanus	Mexican rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Juncus* sp.**	Rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Juncus xiphioides	Iris leaved rush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Juniperus californica	California juniper	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Keckiella breviflora	Gaping keckiella	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Krascheninnikovia lanata	Winter fat	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lactuca serriola	Prickly lettuce	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Larrea tridentata	Creosote bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lasthenia californica	Goldfields	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Layia glandulosa	White layia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Layia heterotricha	Pale-yellow layia	Plants	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSAB G-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland.	Alkaline or clay soils; open areas. 90-1800 m.	Low	No	No CNDDB records nearby. Habitat within park.
Lemna minor	Smaller duckweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Lemna* sp.**	Duckweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Lepidium appelianum	Hairy whitetop	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium draba	Whitetop	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium flavum	Yellow pepper grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium fremontii	Desert peppergrass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium lasiocarpum* ssp. *lasiocarpum	Sand pepper grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium nitidum	Shining pepper grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidium perfoliatum	Klamath pepper grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lepidospartum squamatum	Scalebroom	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Leptosiphon aureus* ssp. *Aureuschrysanthus ssp. chrysanthus	Golden linanthus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff with MIG botanist.Confirmed during 2012 Acquisition surveys.
Leptosiphon parviflorus	Variable linanthus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Leptosyne bigelovii	Bigelow coreopsis	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Leptosyne californica	California coreopsis	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lessingia glandulifera* var. *peirsonii	Peirson's lessingia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Linanthus dichotomus	Evening snow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.

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Linanthus parryae	Parry's linanthus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Loeflingia squarrosa	Spreading loeflingia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Loeseliastrum matthewsii	Desert calico	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Logfia depressa	Dwarf cottonrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Logfia filaginoides	California cottonrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lomatium macrocarpum	Large fruited lomatium	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lomatium mohavense	Mohave wild parsley	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Lomatium* sp.**	Lomatium	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Lotus corniculatus	B’rd's foot trefoil	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lupinus albifrons	Silver bush lupine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staf with MIG botanist.
Lupinus bicolor	Miniature lupine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lupinus breweri* var. *grandiflorus	Showy brewer’s lupine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lupinus concinnus	Bajada lupine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lupinus elatus	Silky lupine	Plants	None	None	CRPR 4.3	None	Lower montane coniferous forest, upper montane coniferous forest.	1500-3000 m.	High	Yes	Confirmed during 2012 Acquisition surveys.
Lupinus excubitus* var. *excubitus	Grape lupine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Lycium andersonii	Anderson's box thorn	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Lycium cooperi	Cooper's box thorn	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Lycium* sp.**	Lycium	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff with MIG botanist.
Malacothamnus fremontii	Fremont's bush mallow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Malacothrix coulteri	Snake's head	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff with MIG botanist.
Malacothrix glabrata	Desert dandelion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Marrubium vulgare	Horehound	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Matricaria discoidea	Pineapple weed, chamomile	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Melica imperfecta	Coast range melic	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Melica* sp.**	California melic	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Melica stricta	Rock melic	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Melilotus indicus	Annual yellow sweetclover	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mentzelia affinis	Yellow comet	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff with MIG botanist.
Mentzelia albicaulis	White stemmed blazing star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mentzelia congesta	Clustered blazing star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Mentzelia eremophila	Solitary blazing star	Plants	None	None	4.2	SB_CalBG/RSABG; SB_UCBG	Mojavean desert scrub	N/A	Moderate	No	No CNDDB records, but habitat is within park. CNPS records nearby.
Mentzelia nitens	Shining blazing star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff with MIG botanist.
***Mentzelia* sp.**	Blazing star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mentzelia tridentata	Creamy blazing star	Plants	None	None	1B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Mojavean desert scrub.	545-1100 m.	Low	No	CNDDB record 1 mile away in 1930. Habitat within park.
Mentzelia veatchiana	Veatch's blazing star	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Microseris sylvatica	Sylvan microseris	Plants	None	None	4.2	None	Chaparral, Cismontane woodland, Great Basin scrub, Pinyon and juniper woodland, Valley and foothill grassland	Serpentinite (rarely)	Low	No	No CNDDB records, but habitat is within park.

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***Minuartia* sp.**	Sandwort	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mirabilis laevis	Desert wishbone bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mirabilis laevis* var. *crassifolia	California four o'clock	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mirabilis laevis* var. *retrorsa	Wishbone bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Monardella exilis	Mojave monardella	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Monardella linoides	Narrow leaved monardella	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Monardella linoides* ssp. *anemonoides	Southern Sierra monardella	Plants	None	None	1B.3	None	Lower montane coniferous forest, cismontane woodland, chaparral.	670-2450 m.	Moderate	No	CNDDB record 0.7 miles away in 1956. Habitat within park.

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Monardella linoides* ssp. *linoides	Flax like monardella	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Monardella odoratissima* ssp. *Glauca	Mountain pennyroyal	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Mucronea perfoliata	California spineflower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Muhlenbergia rigens	Deergrass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Muilla coronata	Crowned muilla	Plants	None	None	4.2	None	Chenopod scrub, Joshua tr“e "woodl”nd", Mojavean desert scrub, Pinyon and juniper woodland	N/A	Low	No	No CNDDB records, but habitat is within park.
Myriopteris covillei	Coville’s lip fern	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2021 surveys by park staff with MIG botanist.
Nasturtium officinale	Watercress	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Navarretia setiloba	Piute Mountains navarretia	Plants	None	None	1B.1	BLM_S-Sensitive | USFS_S-Sensitive	Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland.	Red clay soils, or on gravelly loam. 180-1645 m.	Low	No	No nearby records, but habitat is within park.
Nemacladus secundiflorus* var. *secundiflorus	Large-flowered nemacladus	Plants	None	None	4.3	None	Chaparral, Valley and foothill grassland	N/A	Low	No	No CNDDB records, but habitat is within park.
***Nemacladus* sp.**	Thread plant	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Nitrophila occidentalis	Western nitrophila, Boraxweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Oenothera californica* ssp. *californica	California evening primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Oenothera* sp.**	Evening primrose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Opuntia basilaris	Beavertail cactus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Opuntia basilaris* var. *basilaris	Beavertail cactus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Oxytheca perfoliata	Saucer plant	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pectocarya heterocarpa	Chuckwalla pectocarya	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pectocarya linearis* ssp. *ferocula	Slender comb seed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pectocarya penicillata	Winged pectocarya	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pectocarya platycarpa	Broad nutted comb bur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pectocarya setosa	Moth combseed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Pectocarya* sp.**	Pectocarya	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Pedicularis semibarbata	Pine woods lousewort	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Penstemon incertus	Western desert penstemon	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Penstemon rostriflorus	Bridge's penstemon	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Penstemon* sp.**	Penstemon	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Penstemon speciosus	Showy penstemon	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pentachaeta fragilis	Fragile pentachaeta	Plants	None	None	4.3	None	Chaparral, Lower montane coniferous forest	N/A	Low	No	No CNDDB records, but habitat is within park.
Perideridia bacigalupii	Bacigalupi's yampah	Plants	None	None	4.2	None	Chaparral, Lower montane coniferous forest	N/A	Low	No	No CNDDB records, but habitat is within park.

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Perideridia parishii	Parish's yampah	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys, but not in parcels acquired.
Perideridia pringlei	Adobe yampah	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland	N/A	Low	No	No CNDDB records, but habitat is within park.
Peritoma arborea	Bladderpod	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Peritoma arborea* var. *angustata	Bladderpod	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Petalonyx nitidus	Shiny leaf sandpaper plant	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Petalonyx thurberi* ssp. *thurberi	Thurber's sandpaper plant	Plants	None	None	None	None	N/A	N/A	High	Yes	On Calflora list checked 12.28.20
Phacelia cicutaria	Caterpillar phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Phacelia crenulata	Notch leaved phaecelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia davidsonii	Davidson's phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia distans	Common phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia exilis	Transverse Range phacelia	Plants	None	None	4.3	SB_CalBG/RSABG; SB_SBBG	Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest	N/A	Low	No	No CNDDB records, but habitat is within park.
Phacelia fremontii	Fremont's phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia imbricata	Imbricate phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Phacelia nashiana	Charlotte's phacelia	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland.	Granitic soils; sandy or rocky areas on steep slopes or flats. 335-2180 m.	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia novenmillensis	Nine Mile Canyon phacelia	Plants	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Broadleafed upland forest, pinyon and juniper woodland, upper montane coniferous forest, cismontane woodland.	Dry disturbed banks, granitic or metamorphic soils; sandy or gravelly sites. 1280-2350 m.	Low	No	No CNDDB records nearby, but habitat is within park.
Phacelia ramosissima	Branching phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia rotundifolia	Round leafed phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.

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***Phacelia* sp.**	Phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phacelia tanacetifolia	Tansy leaved phacelia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phlox austromontana	Southern mountain phlox	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pholisma arenarium	Dune food	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pholistoma auritum* var. *auritum	Blue fiesta flower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pholistoma membranaceum	White fiesta flower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phoradendron bolleanum	Bollean mistletoe	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Phoradendron leucarpum* ssp. *tomentosum	Oak mistletoe	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Pinus jeffreyi	Jeffrey pine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pinus lambertiana	Sugar pine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pinus monophylla	Single leaf pinyon pine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pinus sabiniana	Gray pine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Plagiobothrys arizonicus	Arizona popcorn flower	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Plagiobothrys torreyi* var. *perplexans	Chaparral popcornflower	Plants	None	None	4.3	None	Chaparral, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	N/A	Low	No	No CNDDB records nearby. Habitat is within park.

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Plagiobryoides vinosula	Wine-colored tufa moss	Plants	None	None	4.2	None	Cismontane woodland, Meadows and seeps, Mojavean desert scrub, Pinyon and juniper woodland, Riparian woodland	N/A	Moderate	No	No CNDDB records. CNPS records are nearby in Jawbone Canyon and habitat is within park.
Plantago lanceolata	Ribwort	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Plantago ovata	Desert plantain	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Platystemon californicus	Cream cups	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Poa annua	Annual blue grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Poa bulbosa	Bulbous blue grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Poa secunda	One sided blue grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Poa secunda* ssp. *secunda	Sandberg's bluegrass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Polygonum* sp.**	Knotweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Polypogon interruptus	Ditch beard grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Polypogon monspeliensis	Annual beard grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Populus fremontii* ssp. *fremontii	Fremont cottonwood	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Potentilla gracilis	Northwest cinquefoil, Slender cinquefoil	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Prosopis glandulosa* var. *torreyana	Mesquite	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Prunus andersonii	Desert peach	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Prunus fasciculata	Desert almond	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Prunus fasciculata* var. *fasciculata	Desert almond	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pseudognaphalium luteoalbum	White cudweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Psorothamnus arborescens	Mojave indigo bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2021 surveys by park staff and MIG botanist.
Psorothamnus arborescens* var. *minuti	Mojave indigo bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Pterostegia drymarioides	Fairy mist	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Puccinellia simplex	California alkali grass	Plants	None	None	1B.2	BLM_S-Sensitive	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools.	Alkaline, vernally mesic. Sinks, flats, and lake margins. 1-915 m.	None	No	No CNDDB records nearby or habitat within park.
Purshia tridentata	Bitterbrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus agrifolia	Coast live oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus chrysolepis	Gold cup live oak, Canyon live oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus douglasii	Blue oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus garryana var. breweri	Oregon oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus turbinella	Shrub live oak, Sonoran scrub oak	Plants	None	None	CRPR 4.3	IUCN_LC-Least Concern	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland.	1200-2000 m.	High	Yes	Confirmed during 2012 Acquisition surveys.

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Quercus wislizeni	Interior live oak, chaparral oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Quercus wislizeni* var. *frutescens	Interior scrub oak	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Rafinesquia neomexicana	Desert chicory	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Rhamnus crocea	Redberry	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Rhamnus ilicifolia	Evergreen buckthorn, Hollyleaf redberry	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Ribes menziesii* var. *ixoderme	Aromatic canyon gooseberry	Plants	None	None	None	None	Chaparral, cismontane woodland.	In forest openings. 610-1325 m.	Low	No	No CNDDB records nearby. Habitat is within park.
Ribes quercetorum	Oak gooseberry	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Rosa woodsii	Wood's rose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Rosa woodsii* ssp. *ultramontana	Interior rose	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Rumex salicifolius	Willow leaved dock	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Rumex* sp.**	Dock	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salix exigua* var. *exigua	Sandbar willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salix gooddingii	Goodding's willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salix laevigata	Polished willow, Red willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salix lasiolepis	Arroyo willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Salix scouleriana	Scouler willow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Salix* sp.**	Willow sp.	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salvia columbariae	Chia sage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Salvia dorrii* var. *dorrii	Dorr's sage	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sambucus nigra* ssp. *caerulea	Blue elderberry	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Schismus barbatus	Mediterranean grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Schismus* sp.**	Mediterranean grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Schoenoplectus pungens var. longispicatus	Common threesquare	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Sclerocactus polyancistrus	Mojave fish-hook cactus	Plants	None	None	4.2	IUCN_LC; SB_CalBG/RSABG	Great Basin scrub, Joshua tr“e "woodl”nd", Mojavean desert scrub	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Scrophularia californica	California bee plant	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Scrophularia desertorum	Desert figwort	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Scutellaria mexicana	Bladder sage, Paper bag bush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Senecio flaccidus	Shubby ragwort	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Senecio flaccidus* var. *monoensis	Mono groundsel	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Senna armata	Desert senna	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Sidalcea hickmanii* ssp. *parishii	Parish's checkerbloom	Plants	None	Rare	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral, cismontane woodland, lower montane coniferous forest.	Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks and fire roads along the mountain summits. 1095-2135 m.	Low	No	No CNDDB records nearby. Habitat is within park.
***Sidalcea* sp.**	Checkerbloom	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sidalcea sparsifolia	Southern checkerbloom	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sisymbrium altissimum	Tumble mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sisymbrium irio	London rocket	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.

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***Sisymbrium* sp.**	Tumble mustard	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sisyrinchium* sp. *(may be S. halophilum)	Blue eyed grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Solanum* sp.**	Blue witch	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sonchus asper* ssp. *asper	Sow thistle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sphaeralcea ambigua	Desert mallow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Sphaeralcea ambigua* var. *ambigua	Apricot mallow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sphaeralcea ambigua* var. *rosacea	Rosy apricot mallow	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Sporobolus airoides	Alkali sacaton	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Stanleya pinnata* var. *pinnata	Prince's plume	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stephanomeria exigua	Small wirelettuce	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stephanomeria exigua* ssp. *exigua	Mitra	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stephanomeria parryi	Parry rock pink	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stephanomeria pauciflora	Brown plume wire lettuce	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stipa hymenoides	Sand grass, Indian grass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Stipa* sp.**	Stipa	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
Stipa speciosa	Desert needlegrass	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Streptanthus cordatus* var. *piutensis	Piute Mountains jewelflower	Plants	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Broadleafed upland forests, closed-cone coniferous forest, pinyon and juniper woodland.	Along roadbanks and cliffs, metamorphic-red clay soils. 1215-1890 m.	Low	No	CNDDB record 4.6 miles away in 2012. Habitat is within park.
Stuckenia pectinata	Sago pondweed	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Stylocline gnaphaloides	Everlasting stylocines	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Stylocline* sp.**	Stylocine	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Syntrichopappus fremontii	Fremont's syntrichopappus	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Syntrichopappus lemmonii	Lemmon's syntrichopappus	Plants	None	None	4.3	SB_CalBG/RSABG	Chaparral, Joshua tr“e "woodl”nd", Pinyon and juniper woodland	N/A	Moderate	No	No nearby CNDDB record. CNPS record 0.7 miles away in 2014. Habitat is within park.
Tamarix chinensis	Chinese tamarisk	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tamarix ramosissima	Tamarisk	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Taraxacum officinale	Red seeded dandelion	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tauschia parishii	Parish's tauschia	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tetradymia axillaris* var. *axillaris	Catcaw horsebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tetradymia axillaris* var. *longispina	Catclaw horsebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Tetradymia canescens	Gray horsebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tetradymia glabrata	Little leaf horsebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tetradymia stenolepis	Mojave horsebrush	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Tetrapteron palmeri	Palmer's sun cup	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Thysanocarpus laciniatus	Narrow leaved lacepod	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2019 surveys by park staff and MIG botanist.
***Trifolium* sp.**	Clover	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Triteleia piutensis	Piute Mountains triteleia	Plants	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Pinyon and juniper woodland.	Openings. Fine volcanic soil throughout scattered boulders or heavy clay soil with volcanic hardpan. 1580-1655 m.	None	No	CNDDB record 7.2 miles away in 2013. Unlikely to occur.
Tropidocarpum gracile	Slender tropidocarpum, Dobie pod	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Typha latifolia	Broadleaf cattail	Plants	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Uropappus lindleyi	Silver puffs	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Urtica dioica* ssp. *holosericea	Stinging nettle	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
***Verbena* sp.**	Verbena	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Veronica anagallis-aquatica	Water speedwell	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.

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Viola pinetorum* ssp. *Grisea	Grey-leaved violet	Plants	None	None	1B.2	BLM_S-Sensitive	Subalpine coniferous forest, upper montane coniferous forest, meadows and seeps.	Dry mountain peaks and slopes. 1580-3700 m.	Moderate	No	Calflora record 0.6 miles away in 2019. Habitat within park.
Viola purpurea	Goosefoot violet	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Xanthium strumarium	Cocklebur	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Xylorhiza tortifolia* var. *tortifolia	Mohave aster	Plants	None	None	None	None	N/A	N/A	High	Yes	Confirmed during 2012 Acquisition surveys.
Yucca brevifolia	Joshua Tree	Plants	None	Candidate Threatened, WJTCA	CBR, IUCN_LCn/ALeast Concern	None	Joshua tree woodland, montane chaparral, pinyon and juniper woodland, Sonoran and Mojavean desert scrub.	750-2200 m.	High	Yes	Seen regularly in the Park.

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Anniella campi	Southern Sierra legless lizard	Reptiles	None	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Desert canyons and springs along western edge of the Mojave Desert in Kern and Inyo counties.	Microhabitat of this species is poorly known. Other legless lizard species occur in sparsely vegetated areas with moist, loose soil. Often found underneath leaf litter, rocks, and logs.	Low	No	CNDDB record 9.5 miles away in 1978. Habitat is within park.
Anniella stebbinsi	Southern California legless lizard	Reptiles	None	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in tITehachapi and Piute Mountains in Kern County.	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	High	No	CNDDB record within park in 2005.

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Aspidoscelis tigris	Western whiptail	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Callisaurus draconoides rhodostictus	Western zebra-tailed lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Crotalus cerastes	Sidewinder	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Crotalus oreganus	Western rattlesnake	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Crotalus scutulatus	Mojave rattlesnake	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Crotaphytus bicinctores	Great Basin collared lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Dipsosaurus dorsalis	Desert iguana	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.

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Emys marmorata	Western pond turtle	Reptiles	None	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Low	No	No nearby CNDDB records. Habitat is within park.
Gambelia wislizenii	Long-nosed leopard lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Gopherus agassizii	Desert tortoise	Reptiles	Threatened	Endangered	None	IUCN_CE-Critically Endangered	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat.	Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	High	Yes	Seen regularly in the Park.
Lampropeltis californiae	California kingsnake	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen during 2020 park surveys.

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Lichanura orcutti	Rosy boa	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen in 2019 surveys.
Masticophis flagellum	Coachwhip	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Masticophis flagellum piceus	Red racer	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Phrynosoma blainvillii	Coast horned lizard	Reptiles	None	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	High	Yes	Seen incidentally in 2022.
Phrynosoma platyrhinos	Desert horned lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Pituophis catenifer	Gopher snake	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Salvadora hexalepis mojavensis	Mojave patch-nosed snake	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen incidentally in 2022.
Sauromalus ater	Chuckwalla	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen in 2019 surveys.
Sceloporus occidentalis	Western fence lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.

Scientific Name	Common Name	Taxon	Federal Status	State Status	CA Rare Plant Rank	Other Status	General Habitat (if special status species)	Microhabitat (if special status species)	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
Sceloporus uniformis	Yellow-backed desert spiny lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Uta stansburiana	Common side-blotched lizard	Reptiles	None	None	None	None	N/A	N/A	High	Yes	Seen regularly in the Park.
Xantusia vigilis	Desert night lizard	Reptiles	None	None	None	None	N/A	N/A	High	No	Habitat within park.

Status Key:

Federal (USFWS)

FE: Federally-listed Endangered

FT: Federally-listed Threatened

FD: Federally-delisted

FC: Federal Candidate

State

SE: State-listed Endangered

ST: State-listed Threatened

SCE: State Candidate Endangered

SSC: State Species of Special Concern

CFP: California Fully Protected Species

WJTCA: Western Joshua Tree Conservation Act

California Native Plant Society (CNPS)

Rank 1A – Presumed extinct in California

Rank 1B – Rare, threatened, or endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California, but more common elsewhere

Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere

Rank 3 – Plants for which more information is needed – A review list

Rank 4 – Plants of limited distribution – A watch list

Additional threat ranks endangerment codes are assigned to each taxon or group as follows:

.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).

.2 – Fairly endangered in California (20-80% occurrences threatened).

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

Sources:

The wildlife and plant inventory was initially compiled using data from park surveys as well as reports generated from the CDFW California Natural Diversity Database (CNDDB), United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Rare Plant Inventory. The IPAC search referenced a 5-mile buffer zone enclosing and surrounding the Park footprint to ensure nearby occurrences were captured of similar habitat types. For CNDDB and CNPS, each quadrant encompassing or adjacent to the Park was searched, resulting in a 20 quadrant inventory (CINCO, CROSS MOUNTAIN, DOVE SPRING, PINYON MOUNTAIN, SALTDALE NW, CRANE MOUNTAIN, FREEMAN JUNCTION, HORSE CANYON, CANTIL, CALIFORNIA CITY N, LAKE ISABELLA S, WOOLSTALF CREEK, LORAINE, PIUTE PEAK, CLARAVILLE, EMERALD MTN., CACHE PEAK, MOJAVE NE, TEHACHAPI NE). These sources were accessed on May 5, 2022 and saved for future reference.

11 Appendix 2: Management Action Details

Once a project or action has been selected for implementation, it will undergo assessment using the CDPR Project Evaluation Form to determine the necessary documentation for compliance with CEQA.

Management Actions related to ongoing natural resource and maintenance activities

- Prevention and naturalizing of unauthorized and redundant trails. New unauthorized trail development can be detected during annual Trail Condition Evaluations or incidental sightings during day-to-day work. These trails will be barricaded with rocks or tortoise-friendly fencing, signed, and/or vertically mulched. Unauthorized trail development may be prevented by installing permanent barricades such as fencing or rocks, or enforcing an area closure. Preventing new unauthorized trail development and resulting damage to native vegetation will aid in conserving existing native vegetation and habitat communities.
- Removal of invasive species using manual or mechanical removal. Chemical treatment will not be done at this time due to the organic cattle grazing lease for Onyx SVRA.
    - Manually remove tamarisk species in the Park. New tamarisk observations may be detected through the Early Detection, Rapid Response monitoring program or incidentally during day-to-day park operations. Tamarisk will be removed manually or mechanically from September through January to avoid nesting bird season. Any florets will be bagged and all tamarisk debris will be removed from site.
    - Manually or mechanically remove tree of heaven if it encroaches onto MU3a. Any florets will be bagged and all tree of heaven debris will be removed from the site. New tree of heaven occurrences in MU 3a may be detected through Photo Monitoring or incidentally during day-to-day park operations.
- Maintain existing fence lines and repair damage as needed. Replace broken wood posts, t-posts, and wire as needed. Damaged fencing may be detected incidentally during day-to-day park operations.
- Remove cattails to restore open water at Butterbredt and Alphie Spring. Cattails are removed by hand. Seed heads are bagged and all cattail debris is removed from site. Cattail removal is done from September through January to avoid nesting bird season.
- Protection of wildlife and their habitat – other management actions that conserve or improve habitats or vegetation communities correlate with protecting species that use those spaces for shelter or foraging. Example management actions and best management practices (BMPs) may include:

    - Removing trash and debris from natural areas.
    - Adding barriers to open pipes.
    - Leaving snags or downed trees in natural areas unless they are a hazard to staff or visitors.
- Low intensity rest-rotation cattle grazing.
- Removal of livestock from a pasture if/when proper use factors are met for the season.

Management Actions related to Policy and Regulation compliance

- Implement the Soil Conservation Plan by 2025.
- Conduct required project impact evaluations and monitoring and implement BMPs to ensure compliance with project permits, management plans, and state and federal laws and regulations.
- Continue project impact evaluations and require standard project requirements and/or mitigation as required through the CEQA process – Start with the CDPR Form 183: Project Evaluation Form and identify any additional CEQA or permitting required during this impact analysis.
- Conduct pre-construction nesting bird surveys and monitoring.
- Conduct pre-construction special-status plant and animal habitat surveys.
- Red sticker/Green sticker season – Red stickers are issued through the Department of Motor Vehicles to registered OHVs that are not California Air Resources Board (CARB)-compliant with new emission standards. These vehicles are only allowed to ride in the Park during the Red-sticker season (October 1 through April 30). Green stickers are issued to CARB compliant OHVs and can ride within the Park all year.

12 Appendix 3: Monitoring Methodology

Trail Condition Evaluations

Trail Condition Evaluations are done as part of the Soil Conservation Plan, but are also used to document the locations of unauthorized trails which is needed for monitoring the metric for the WHPP Objective 1 and Objective 2.

Baseline: The baseline of locations of where unauthorized trails intersect roads throughout the Park will be determined using data collected in 2023 and 2024.

Methods:

Beginning in 2022, Trail Condition Evaluations, as described in Appendix 3 of the 2020 Soil Conservation Standard and Guidelines (CDPR 2020), were be systematically done over time to evaluate the initial condition of designated OHV trails in Onyx SVRA. Trail Condition Evaluations

will collect data that will be used to create maps of trail conditions and water crossings in all MUs containing CDPR managed trails, including MUs 3-6. Trails in areas with a high erosion hazard and trail sections that cross drainages, determined by the Park's Soil Conservation Plan, will be prioritized in the order and frequency of trail evaluations. Additionally, trails with higher use levels (SC175, SC 251, and trails in MU4) will be prioritized.

Trail Condition Evaluations will be done digitally using ArcGIS Field Maps. Within Field Maps, monitoring personnel will enter the same information collected in the Trail Condition Evaluation Form found below. CDPR managed trails will be broken down into trail sections. Trail sections will be rated green, yellow, or red for trail conditions and sustainability. Ratings will be based on the information collected during the evaluations, such as slope, watercourse crossings, drainage features and function, and erosion condition. The data collected in Field Maps will be used to make a map of the trail conditions throughout the Park with each section represented as green, yellow, or red. Beginning in 2023, point locations of where unauthorized user-created trails cross designated routes will be collected. Point locations of unauthorized user-created trails will be collected in MUs 3-6 as well as the fenced areas in MU 2.

For Quality Assurance/Quality Control (QA/QC), monitoring personnel will be properly trained to ensure data is consistently collected. As Trail Condition Evaluations start being implemented, monitoring personnel will monitor a subset of the trails together so that the ratings and methods are standardized. If there are enough available staff and vehicles, a duplicate sample of ten percent of the trails will be done by different individuals to check the QA/QC of the collected data.

Trail conditions will be assessed using the timeline below.

- Year 1 (2022): Natural resource staff will become familiar with assessing trails using the Trail Condition Evaluation Form. Trail assessments will be done for all CDPR managed routes. A field map will be made using ArcGIS Online to collect data for the trail assessments and spatially represent the results.
- Years 2-5 (2023-2026): Reassessments will be done annually.

Uncertainties:

Staff were trained by the Soil Conservation Plan Working Group in the spring of 2022. This is a novel program, there is expected to be a learning curve in finalizing the surveys' methodology, timing, and techniques and accumulating and analyzing the information and data.

Trail Condition Evaluation Form:

I. Form Header Information

Trail Name / No.

Enter name and/or number of the trail for the rated segment.

Vehicle Type

Circle one or more of the vehicle types, MC (motorcycle), ATV (all-terrain vehicle), or 4x4 (four wheel drive), or SM (snow mobile).

Trail Difficulty

Circle one of the trail difficulties, easiest, more difficult, most difficult.

USGS Quad

Enter the name of the USGS topographic map quadrangle on which the rated segment occurs.

Planning Watershed

Enter in either the name or the code for the CalWater (2.2) planning watershed in which the trail occurs (USDA, Natural Resources Conservation Service).

Begin Segment

Enter the location where the rated segment starts. This could be a GPS file designation, a named trail junction, a milepost, etc.

End Segment

Enter the location where the rated segment ends. This could be a GPS file designation, a named trail junction, a milepost, etc.

Site Characteristics

Give a generic description of the site and soil-related conditions that exist along the trail.

Soil/Geology

Enter a brief description of the soil and/or geologic units on which the trail segment is located. Information can be provided from field observations by a qualified soil scientist or geologist, or it may be obtained from NRCS or USFS soils maps, geological publications listed in the California Geological Survey (CGS) geology/soils index and website, and other published and unpublished reports including various planning documents.

Vegetation

Enter a brief description of the primary vegetation present in the vicinity of the trail.

Range of Side Slopes

Circle the range of side slope percent (%) that the segment of trail crosses.

Trail Slope

Enter the average trail slope and the maximum trail slope in percent (%) for the segment evaluated.

Rating (GYR)

As the final step in completing the form, enter the recommended overall rating for the whole segment. Enter only *one* letter for the rating: a G, Y, or R.

GPS Ref

Enter the file name of the GPS record. Add location information following post-processing of the GPS record.

Rated By

Enter your name or initials as the rater.

Date

Enter the date the field observations were made and recorded.

Reviewed By

Signature of responsible official who reviewed and acted on the rating.

Date

Date reviewed by responsible official.

Page of

Enter page number and total number of pages used to rate the segment.

II. Form Body Information

Column 1 – Section; Begin – End

For features with a length dimension, enter the beginning and ending distance of that feature, e.g. 1200 feet to 1500 feet for a 300foot feature. Distance can either be from an established reference point such as a trail marker (mile post) or intersection, or the GPS file designation for the beginning and ending points.

Column 2 - Section Length Enter the length of the section being evaluated and note whether it is an estimate or has been measured.

Column 3 - Trail Slope

Enter the slope (grade) of the tread surface for the section evaluated as a percent (%) If the slope varies, enter the range followed by the slope most typical for the section in parentheses, e.g. 3 – 25% (6%).

Column 4 - Crossings

Facing downstream, every crossing has three primary components: the left approach (LA), the right approach (RA) and the channel section (CS). Enter a checkmark (√ or X) in the column corresponding to the part of the crossing being evaluated, e.g. LA for left approach. Rate each component on a separate line. Rate each approach according to G7, Y7, or R7. Rate each channel section according to G8, Y8, or R8. Record the condition of all watercourse approaches even if the rating is a G7. This serves as documentation that the approach was evaluated.

	Approach Length (from last water break or drainage divide to channel)		
Trail Gradient	< 30 feet	30 – 150 feet	> 150 feet
< 8 %	G7	G7	Y7
8 – 20%	G7 or Y7	Y7 or R7	R7
> 20%	Y7 or R7	R7	R7

Guidelines for Rating Approaches to Watercourse Crossings

The key concept is sediment delivery. Where runoff water from a trail is drained onto a natural slope a long distance from a watercourse, most sediment is filtered out before it can reach a watercourse.

Column 5 - GYR Condition Codes

Enter the appropriate condition code using the Green, Yellow, Red indicators of trail conditions listed as guidelines. More detailed descriptions are presented in the expanded 2008 Soil Conservation Guidelines/Standards for OHV Recreation Management.

Where variable conditions are encountered, the rater will have to use good judgment using the condition codes as an overall guide. Additional details can be written in the comments section of the form.

Column 6 - Cause Codes

Using the cause codes provided as guidelines, enter a cause code for each trail section where a condition code was entered in Column 5. More detailed cause code descriptions are presented in the expanded 2008 Guidelines/Standards. Most trail condition problems have multiple causes. Generally, one to three causes, listed in order of importance, will be enough to describe the problem. If the cause of an observed condition is unique, then describe that cause in the comments column. A cause code combined with a GYR condition code will usually both describe the problem and identify a treatment.

Column 7 – Comments

Record observations and recommendations not captured by the basic codes, including unique non-repeatable data.

Column 8 – Photograph Number (s)

Enter the identification number(s) for photographs taken of the evaluated section. As a minimum, one photo should be taken for each section given a Red condition code. If the entire trail segment has been rated Green, take at least one photograph of a representative section of the trail sent

I. Form Header Information

Trail Name / No.

Enter name and/or number of the trail for the rated segment.

Vehicle Type

Circle one or more of the vehicle types, MC (motorcycle), ATV (all-terrain vehicle), or 4x4 (four wheel drive), or SM (snow mobile).

Trail Difficulty

Circle one of the trail difficulties, easiest, more difficult, most difficult.

USGS Quad

Enter the name of the USGS topographic map quadrangle on which the rated segment occurs.

Planning Watershed

Enter in either the name or the code for the CalWater (2.2) planning watershed in which the trail occurs (USDA, Natural Resources Conservation Service (Web)).

Begin Segment

Enter the location where the rated segment starts. This could be a GPS file designation, a named trail junction, a milepost, etc.

End Segment

Enter the location where the rated segment ends. This could be a GPS file designation, a named trail junction, a milepost, etc.

Site Characteristics

Give a generic description of the site and soil-related conditions that exist along the trail.

Soil/Geology

Enter a brief description of the soil and/or geologic units on which the trail segment is located. Information can be provided from field observations by a qualified soil scientist or geologist, or it may be obtained from NRCS or USFS soils maps, geological publications listed in the CGS geology/soils index and website, and other published and unpublished reports including various planning documents.

Vegetation

Enter a brief description of the primary vegetation present in the vicinity of the trail.

Range of Side Slopes

Circle the range of side slope percent (%) that the segment of trail crosses.

Trail Slope

Enter the average trail slope and the maximum trail slope in percent (%) for the segment evaluated.

Rating (GYR)

As the final step in completing the form, enter the recommended overall rating for the whole segment. Enter only *one* letter for the rating: a G, Y, or R.

GPS Ref

Enter the file name of the GPS record. Add location information following post-processing of the GPS record.

Rated By

Enter your name or initials as the rater.

Date

Enter the date the field observations were made and recorded.

Reviewed By

Signature of responsible official who reviewed and acted on the rating.

Date

Date reviewed by responsible official.

Page of

Enter page number and total number of pages used to rate the segment.

II. Form Body Information

Column 1 – Section; Begin – End

For features with a length dimension, enter the beginning and ending distance of that feature, e.g. 1200 feet to 1500 feet for a 300 foot feature. Distance can either be from an established reference point such as a trail marker (mile post) or intersection, or the GPS file designation for the beginning and ending points.

Column 2 - Section Length Enter the length of the section being evaluated and note whether it is an estimate or has been measured.

Column 3 - Trail Slope

Enter the slope (grade) of the tread surface for the section evaluated as a percent (%) If the slope varies, enter the range followed by the slope most typical for the section in parentheses, e.g. 3 – 25% (6%).

Column 4 - Crossings

Facing downstream, every crossing has three primary components: the left approach (LA), the right approach (RA) and the channel section (CS). Enter a checkmark (√ or X) in the column corresponding to the part of the crossing being evaluated, e.g. LA for left approach. Rate each component on a separate line. Rate each approach according to G7, Y7, or R7. Rate each channel section according to G8, Y8, or R8. Record the condition of all watercourse approaches even if the rating is a G7. This serves as documentation that the approach was evaluated.

	Approach Length (from last water break or drainage divide to channel)		
Trail Gradient	< 30 feet	30 – 150 feet	> 150 feet
< 8 %	G7	G7	Y7
8 – 20%	G7 or Y7	Y7 or R7	R7
> 20%	Y7 or R7	R7	R7

Guidelines for Rating Approaches to Watercourse Crossings

The key concept is sediment delivery. Where runoff water from a trail is drained onto a natural slope a long distance from a watercourse, most sediment is filtered out before it can reach a watercourse.

Column 5 - GYR Condition Codes

Enter the appropriate condition code using the Green, Yellow, Red indicators of trail conditions listed as guidelines. More detailed descriptions are presented in the expanded 2008 Soil Conservation Guidelines/Standards for OHV Recreation Management.

Where variable conditions are encountered, the rater will have to use good judgment using the condition codes as an overall guide. Additional details can be written in the comments section of the form.

Column 6 - Cause Codes

Using the cause codes provided as guidelines, enter a cause code for each trail section where a condition code was entered in Column 5. More detailed cause code descriptions are presented in the expanded 2008 Guidelines/Standards. Most trail condition problems have multiple causes. Generally, one to three causes, listed in order of importance, will be enough to describe the problem. If the cause of an observed condition is unique, then describe that cause in the comments column. A cause code combined with a GYR condition code will usually both describe the problem and identify a treatment.

Column 7 – Comments

Record observations and recommendations not captured by the basic codes, including unique non-repeatable data.

Column 8 – Photograph Number (s)

Enter the identification number(s) for photographs taken of the evaluated section. As a minimum, one photo should be taken for each section given a Red condition code. If the entire trail segment has been rated Green, take at least one photograph of a representative section of the trail segment

OHV Trail Condition Evaluation Form

Rated By _____ Date _____Reviewed By _____ Date _____ Page ___ of ___

Trail Name _____Trail No. _____ Vehicle Type: MC ATV 4x4 SM Trail Difficulty: easiest, more difficult, most difficult

USGS Quad _____ Planning Watershed _____ Begin Segment _____ End Segment _____

Site Characteristics: Soil/Geology _____ Vegetation _____ Side Slopes: 0-30% 30-50% >50%

RATING (**G**,**Y**,**R**) ____GPS Ref _____ Avg Trail Slope ___% Max Trail Slope ___%

Section B = Begin E = End	Section Length	Trail slope	Crossings LA	 CS	 RA	Condition Codes	Cause Codes	Comments	Photograph Numbers
B E									
B E									
B E									
B E									
B E									
B E									
B E									

B E									
B E									
B E									

OHV Trail Condition Evaluation Code Key

	Green		Yellow		Red
G1	**Water control** is provided by enough functional water breaks to divert runoff from the trail before it has the volume and velocity to cause erosion. Where present, rills occur on less than 1/3 of the distance between water breaks.	Y1	Water breaks do not divert all runoff from the trail because they are nearly filled to capacity and/or are partially breached, or spaced too widely. Where present, rills occur on more than 1/3 of the distance between water breaks	R1	Water breaks no longer divert runoff from the trail because they are full and/or have been breached, or are absent or spaced too widely. Gully or rill erosion may be present.
G2	No accelerated **erosion off-trail.** Runoff at water break outlets and on slopes adjacent to the trail is dispersed effectively. Vegetation or litter filters all sediment.	Y2	Rill erosion and/or sediment deposition occurs at water break outlets and/or on slopes adjacent to the trail. All sediment is filtered or deposited before it reaches a watercourse.	R2	Gully erosion occurs at water break outlets or on slopes adjacent to the trail and/or sediment is transported to a Type I or Type II watercourse.
G3	**Sediment traps**, where present, are functional and have adequate capacity for at least one season of use. Trapped sediment can be retrieved during normal maintenance.	Y3	Where present, most sediment traps are full or nearly full, but still functional. Most trapped sediment can be retrieved during normal maintenance.	R3	Where present, sediment traps have been breached and have a plume of sediment and/or a gully below the breach. Most sediment cannot be retrieved.
G4	**Tread wear** is minimal. Tread is generally incised less than 6 inches. Tread wear is generally evident on less than 1/3 of the distance between water breaks or on less than 1/3 of the tread width.	Y4	Tread wear is evident. Tread is generally incised 6 to 12 inches and tread wear is generally evident on more than 1/3 the distance between water breaks and on more than 1/3 of the tread width.	R4	Tread wear is severe. Tread incision is generally greater than 12 inches deep and tread wear is generally evident on the entire distance between water breaks.

G5	**Tread width** is generally no greater than 1.5 times the design width for the designated use.	Y5	Tread width is generally greater than 2 times the design width for the designated use and appears to be increasing.	R5	Tread width is generally greater than 3 times the design width for the designated use and has caused or is causing erosion, sedimentation, and damage to vegetation.
G6	**Off-trail travel is** limited to single tracks or single passes generally less than 300 feet long. Tracks are not eroded and have little effect on water control.	Y6	Off-trail travel is common, well defined, and generally greater than 300 feet long. Water control is inadequate and some erosion is apparent.	R6	Off-trail travel has caused severe resource damage, gully erosion, eroded hill climbs, or extensive damage to vegetation and/or sensitive habitat.
G7	**Approach to watercourse crossing** is short and has a gentle gradient. Tread is stable, shows little evidence of erosion, and is at design width. No damage to riparian vegetation outside the tread.	Y7	Approach to watercourse crossing is short and steep or long and gentle. Tread may show some evidence of erosion and may show evidence of widening. Minimal damage to riparian vegetation.	R7	Approach to watercourse crossing is both steep and long and/or tread is unstable and shows evidence of accelerated erosion. Approach may be widening and damaging riparian vegetation.
G8	**Channel Section** has only minor channel widening, minor bank erosion, no bars.	Y8	Channel Section has widened moderately, modest bank erosion, modest lateral and/or mid-channel bars.	R8	Channel Section has widened significantly, extensive bank erosion, large lateral and mid-channel bars.
G9	**Outboard Fill** is stable. Exhibits minor surficial sloughing without sediment transport	Y9	Outboard Fill is distressed. Exhibits cracking and Moderate sloughing w/ limited sediment transport.	R9	Outboard Fill has failed and sediment is moving down slope.

	CAUSE CODES		**CAUSE CODES**
C1	Water breaks not constructed to design standards	**C11**	Rocks or roots exposed in tread
C2	Water break spacing is too wide for conditions	**C12**	Barriers (natural or constructed) to control traffic are lacking
C3	Cascading runoff from a trail or road upslope	**C13**	Mechanical erosion makes maintenance ineffective
C4	Cascading runoff from an impervious surface upslope	**C14**	Storm intensity unusual or unique for the area
C5	Wet area caused by a seep or spring	**C15**	Design / layout /construction prevents effective drainage
C6	Excess soil moisture at time of use	**C16**	Uncompacted sidecast on outboard slope
C7	Trail section is poorly located (describe)	**C17**	Berms, Whoops, and stutter bumps
C8	Trail gradient is too steep for the type and/or amount of use occurring	**C18**	Crossing alters channel dimensions and/or stream gradient.

C9	Segment is not designed for the type or amount of use occurring	**C19**	Rutting or vegetation damage to meadow, spring, wet area, riparian area
C10	Trail Blockage, e.g. brush, logs, rockfall, landslide	**C20**	Segment is not designed for the type and amount of use occurring

VegCAMP Surveys

The state's current standard for vegetation classification and mapping is known as VegCAMP and is administered by CDFW. VegCAMP classifies vegetation according to the National Vegetation Classification System standards, which is a hierarchal classification of vegetation types, distinguishing alliance and association at the finest scale. An association is a characteristic range of species composition, while an alliance is composed of one or more associations and is usually named after the dominant species of the highest strata, for example, the Blue oak woodland alliance. Field surveys identify vegetation alliances and/or associations, and mappers delineate landcover into vegetation type polygons (most commonly at the alliance level) based on information from field surveys and interpretation of aerial imagery. The resulting maps and data provide a foundation for understanding ecosystems and habitats. Currently, 60% of the state is mapped according to VegCAMP standards (CDFW n.d. b, CDFW 2020).

More information about each of these vegetation communities may be found in the Manual of California Vegetation (MCV) online, at vegetation.cnps.org. VegCAMP methods, reports, and data may be found on the VegCAMP website at wildlife.ca.gov/Data/VegCAMP.

Baseline

The footprint of Onyx SVRA is covered by recent VegCAMP vegetation maps, completed in 2020, 2021 and 2013. (Menke et al. 2013, Reyes et al. 2020, Reyes et al. 2021). The maps and data were downloaded in Spring 2022 from the BIOS viewer (CDFW n.d. b), clipped to the Onyx Ranch boundary, and used to generate a list of vegetation types and their associated state ranks. State Parks staff conducted limited reconnaissance, rapid assessment, and releve surveys in April 2022 to validate the map and document additional herbaceous alliances. Results can be found in Section 3.4 VegCAMP and Plant Communities. The results are summarized in Table 6 below.

Methods

The VegCAMP map will be updated every five years along with the WHPP. Vegetation polygons will be reviewed against the most recent NAIP imagery, and areas that show changes from the previous map will be marked for surveying, and polygons will be redrawn and reattributed if necessary. Particular attention should be given to any areas that have experienced fires, floods, restoration, or other management changes that might affect vegetation composition or cover. Surveys and mapping updates will follow standard VegCAMP protocols (CDFW 2020).

Uncertainties

Vegetation maps undergo an assessment to test for map accuracy and must be at least 80% correct to meet VegCAMP standards. There is a potential for errors in map areas that haven't

been groundtruthed, but these areas must still meet the 80% or higher accuracy standard. Details about the specific mapping project may be found in the project reports (Menke et al. 2013, Reyes et al. 2020, Reyes et al. 2021).

Table 6. Vegetation community types at Onyx SVRA.

National Vegetation Classification Standard Name	Common name	Mapped acres within Onyx Ranch SVRA boundary	Global Rarity Ranking	State Rarity Ranking	Sensitive
Herbaceous types					
Achnatherum speciosum Alliance	Desert needlegrass grassland	2.1	G4	**S2***	**Y**
Anemopsis californica - Helianthus nuttallii - Solidago spectabilis Alliance	Yerba mansa - Nuttall's sunflower - Nevada goldenrod alkaline wet meadows	32.7	G3	**S2***	**Y**
California annual and perennial grassland Macrogroup	California annual and perennial grassland	561.5	N/A	N/A	N
Amsinckia (menziesii, tessellata) - Phacelia spp. Alliance	Fiddleneck - Phacelia fields	(These alliances occur as part of California annual and perennial grassland Macrogroup but are not mapped individually)	G5	S5	N
Plagiobothrys nothofulvus Alliance	Popcorn flower fields	(These alliances occur as part of California annual and perennial grassland Macrogroup but are not mapped individually)	G4	S4	N
Californian warm temperate marsh/seep Group	N/A	67.7	N/A	N/A	Y
Mediterranean California naturalized annual and perennial grassland Group	N/A	15.7	N/A	N/A	N
Warm Semi-Desert/Mediterranean Alkali-Saline Wetland Macrogroup	N/A	93.2	N/A	N/A	Y
Shrub types					
Ambrosia dumosa Alliance	White bursage scrub	914.5	G5	S5	N
Ambrosia salsola - Bebbia juncea Alliance	Cheesebush - sweetbush scrub	328.4	G4	S4	N
Ambrosia salsola Alliance	Cheesebush scrub	11.4	G4	S4	N
Artemisia tridentata Alliance	Big sagebrush shrubland alliance	235.4	G5	S5	N

National Vegetation Classification Standard Name	Common name	Mapped acres within Onyx Ranch SVRA boundary	Global Rarity Ranking	State Rarity Ranking	Sensitive
Atriplex canescens Alliance	Fourwing saltbush scrub	158.0	G5	S4	N
Atriplex polycarpa Alliance	Allscale scrub	179.1	G4	S4	N
Baccharis emoryi - Baccharis sergiloides Alliance	Emory's and Broom baccharis scrub	4.5	G4	**S3***	**Y**
Ceanothus cuneatus Alliance	Buck brush chaparral	15.0	G4	S4	N
Ceanothus greggii - Fremontodendron californicum Alliance	Cup leaf ceanothus - California flannelbush chaparral	81.2	G4	**S3***	**Y**
Cercocarpus montanus Alliance	Utah serviceberry - birch leaf mountain mahogany - small leaf mountain mahogany scrub	4.7	G5	S4	N
Coleogyne ramosissima Alliance	Black brush scrub	17,108.3	G5	S4	N
Encelia (actoni, virginensis) - Viguiera reticulata Alliance	Acton's and Virgin River brittle brush - net-veined goldeneye scrub	7.6	G4	**S3***	**Y**
Ephedra nevadensis - Lycium andersonii - Grayia spinosa Alliance	Nevada joint fir - Anderson's boxthorn - spiny hop sage scrub	1,191.9	G5	**S3S4***	**Y**
Ephedra viridis Alliance	Mormon tea scrub	173.6	G4	S4	N
Ericameria linearifolia - Cleome isomeris Alliance	Narrowleaf goldenbush - bladderpod scrub	0.4	G4	S4	N
Ericameria nauseosa Alliance	Rubber rabbitbrush scrub	1,114.8	G5	S5	N
Ericameria teretifolia Alliance	Needleleaf rabbitbrush scrub	6.4	G4	S4	N
Eriogonum fasciculatum - (Viguiera parishii) Alliance	California buckwheat - Parish's goldeneye scrub	2,253.2	G4	S4	N
Eriogonum fasciculatum Alliance	California buckwheat scrub	192.3	G5	S5	N
Eriogonum wrightii - Eriogonum heermannii - Buddleja utahensis Alliance	Wright's buckwheat - Heermann's buckwheat - Utah butterfly-bush scrub	373.2	G3	**S3***	**Y**
Frangula californica - Rhododendron occidentale - Salix breweri Alliance	California coffee berry - western azalea scrub - Brewer's willow	1.0	G4	S4	N

National Vegetation Classification Standard Name	Common name	Mapped acres within Onyx Ranch SVRA boundary	Global Rarity Ranking	State Rarity Ranking	Sensitive
Larrea tridentata - Ambrosia dumosa Alliance	Creosote bush - white bursage scrub	8,434.6	G5	S5	N
Larrea tridentata Alliance	Creosote bush scrub	503.0	G5	S5	N
Lepidospartum squamatum Alliance	Scale broom scrub	561.4	G3	**S3***	**Y**
Prunus fasciculata - Salazaria mexicana Alliance	Desert almond - Mexican bladdersage scrub	12.2	G4	S4	N
Purshia tridentata - Artemisia tridentata Alliance	Antelope bitterbrush - Big sagebrush scrub	288.2	G4	S4	N
Rhus trilobata - Crataegus rivularis - Forestiera pubescens Alliance	Basket bush - river hawthorn - desert olive patches	0.4	G4	**S3***	**Y**
Salix lasiolepis Alliance	Arroyo willow thickets	11.9	G4	S4	N
Tree types					
Juniperus californica Alliance	California juniper woodland	544.6	G4	S4	N
Pinus jeffreyi Alliance	Jeffrey pine forest and woodland	273.3	G4	S4	N
Pinus monophylla Alliance	Singleleaf pinyon woodland	762.4	G5	S4	N
Pinus sabiniana Alliance	Foothill pine woodland	32.5	G4	S4	N
Populus fremontii - Fraxinus velutina - Salix gooddingii Alliance	Fremont cottonwood forest and woodland	3.2	G4	**S3***	**Y**
Quercus chrysolepis Alliance	Canyon live oak forest and woodland	928.1	G5	S5	N
Quercus douglasii Alliance	Blue oak woodland and forest	4.5	G4	S4	N
Quercus wislizeni Alliance	Interior live oak woodland	254.9	G4	S4	N
Salix gooddingii - Salix laevigata Alliance	Goodding's willow - red willow riparian woodland and forest	8.3	G4	**S3***	**Y**
Yucca brevifolia Alliance	Joshua tree woodland	3,004.3	G4	**S3***	**Y**
Non-vegetated mapping units					
Anthropogenic Areas of Little or No Vegetation	N/A	19.6	N/A	N/A	N

National Vegetation Classification Standard Name	Common name	Mapped acres within Onyx Ranch SVRA boundary	Global Rarity Ranking	State Rarity Ranking	Sensitive
Built-up & Urban Disturbance	N/A	7.6	N/A	N/A	N
Massive sparsely vegetated rock outcrop Mapping Unit	N/A	49.9	N/A	N/A	N
Mud Hills sparsely vegetated ephemeral herbs Mapping Unit	N/A	17.5	N/A	N/A	N
North American warm desert bedrock cliff and outcrop Group	N/A	4.5	N/A	N/A	N
Small Earthen-dammed Ponds and Naturally Occurring Lakes	N/A	0.7	N/A	N/A	Y
Unvegetated wash and river bottom Mapping Unit	N/A	18.4	N/A	N/A	Y

Photo Monitoring:

Methods:

This monitoring involves periodically taking the same photos in the same locations and directions so that the photos can be compared over time to detect changes. At all photo monitoring locations, photos are taken twice a year (in February and August) and the photo monitoring form below is filled out by staff. The form includes the location, bearing, date, time, camera type, and weather conditions. This monitoring protocol can be used for multiple S.M.A.R.T. Targets. Photo Monitoring may be extended to include locations at the stock ponds in Kelso Valley to ensure that the current balance of cattails and open water continues.

Photo Monitoring Form:

Photo Monitoring Form									
Photo Point	Location	Coordinates	Date	Time	Camera	Bearing	Weather	Notes	Name of Surveyor
1	Boundary of MU 3a and BLM Land	35.38200 , -118.114412				314° NW			

Photo Monitoring Form									
Photo Point	Location	Coordinates	Date	Time	Camera	Bearing	Weather	Notes	Name of Surveyor
2	Butterbredt Spring	35.382130, -118.113200				184°S			
3	Alphie Spring	35.368816, -118.078575				50°NE			

Baseline

Objective 3- In November of 2022, there are no tree of heaven sprouts on state property in MU 3a.

Objective 7- In October of 2022, there is no open water at both Alphie (top photo) and Butterbredt Spring (bottom photo).

Uncertainties

Photo monitoring only documents what is in view for the photo. Photo locations were chosen to give the broadest overview of the targeted locations, but some details may not be visible in the photos. For Objective 3, some sprouts and for Objective 7 small sections of open water may not be visible. Surveyors will field check results of the photo monitoring when the photos are taken to check for discrepancies. Any discrepancies will be noted in the notes.

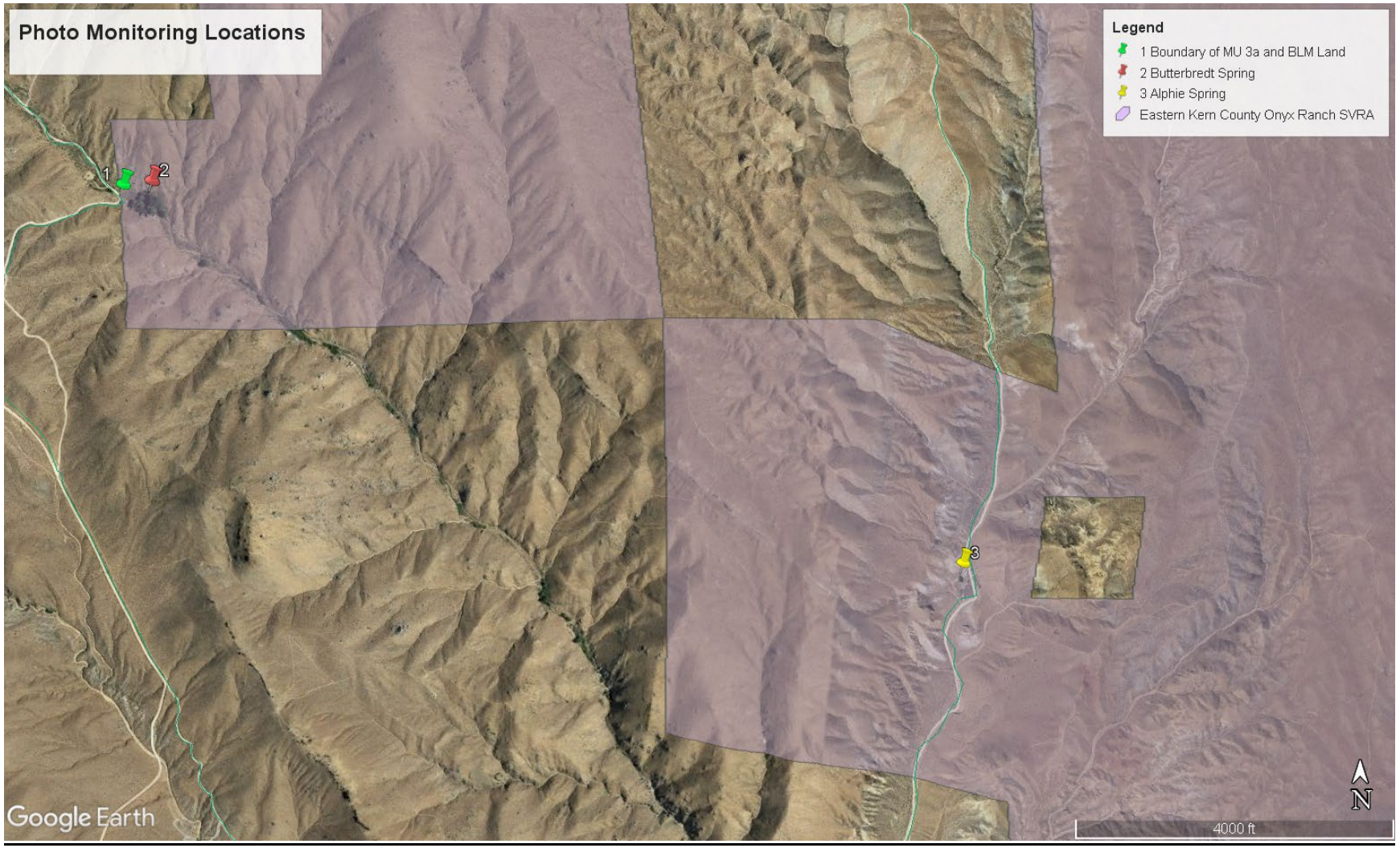


Figure. Map of Photo Monitoring Locations

Unauthorized Trail Measurements

Baseline

Baseline data for the linear feet of unauthorized trails in MU 5 along SC 251 will be determined in 2023 using drone imagery collected in early 2023.

Methods

This monitoring measures the linear feet of trails within target areas using either recent aerial imagery or ground-based assessments. Aerial imagery can be accessed through on an as needed basis through drone surveys or through biennial NAIP. Aerial imagery is used to determine the location and length of unauthorized trails. When recent aerial imagery is not available and drone surveys are not feasible, field surveys will be done in target areas to measure the length of unauthorized trails. Field surveys involve walking the length of the unauthorized trails while tracking the path using a GPS connected device. The target area for Objective 4 is in MU 5 along SC251. Aerial imagery will be collected by drone in 2023 and analyzed to determine the baseline linear feet of existing unauthorized trails. Once completed, a map will be created and added to this section. Unauthorized trail measurements will be done every five years concurrent with the WHPP update.

Uncertainties

Recent aerial imagery is not always readily available. NAIP aerial imagery is collected every other year and may not be collected during the year of the WHPP update. Drone imagery is available on as needed basis for the Park as of the fall of 2022, but the drone operation is contingent on one Environmental Scientist in the district with approval for drone flight. Drone operation may not be possible in five years if this Environmental Scientist is not available. If recent aerial imagery is not available, field surveys will be done to measure the length of unauthorized trails in MU 5 along SC 251.

Inventory Update and HMS Taxa Monitoring Protocols:

Twenty-one trail and non-trail habitat monitoring plots throughout the SVRA are used for vegetation, avian, small mammal, and reptile surveys. Information on the selection of monitoring plots, along with a map of their locations, is in the section below.

Habitat Monitoring System Plot Selection:

A generalized random tessellation stratified (GRTS) design was used to select random monitoring plots that are spatially balanced and stratified across the various habitats in Onyx

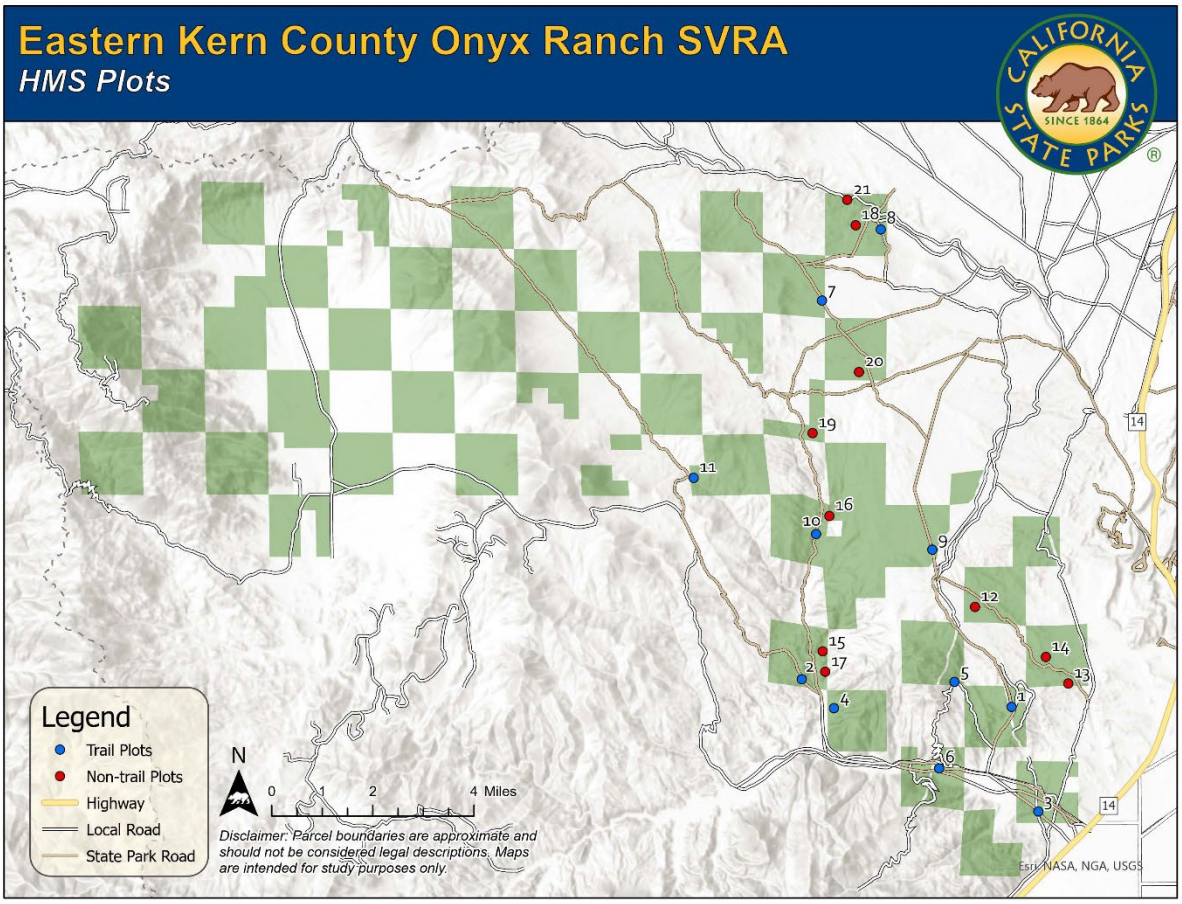
SVRA. GRTS plot selection and analysis was done in the program R using the package *spsurvey* and *SDrawNPS*.

Since there is no authorized OHV use in the western parcels of the Park, HMS plots were only selected in the eastern parcels. Future HMS plots may be added to include the western parcels of the Park. Plot selection was at the vegetation alliance level, including blackbrush scrubland and Joshua tree woodland, lower Mojave scrub and desert wash, creosote scrubland, and wetland and riparian alliances. Within the alliances, HMS plots were selected at the use type (i.e. trail or non-trail area). Non-trail areas are at least 250 meters away from a trail and are not within open areas. Using GRTS, HMS plots were selected by the stratum of use type / vegetation alliance. Three main HMS plots and three contingency HMS plots were selected for each stratum.

The generated main HMS plots and contingency HMS plots were field verified in 2018. If a main HMS plot was inaccessible in the field, a contingency plot was substituted. A total of 21 HMS plots were field verified and will be used for vegetation, reptile, and avian monitoring beginning in 2019.

Plot Number	Use Type	Habitat Type
1	Trail	Creosote and Bursage Scrub
2	Trail	Creosote and Bursage Scrub
3	Trail	Creosote and Bursage Scrub
4	Trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
5	Trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
6	Trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
7	Trail	Joshua Tree Woodland / Blackbrush Scrubland
8	Trail	Joshua Tree Woodland / Blackbrush Scrubland
9	Trail	Joshua Tree Woodland / Blackbrush Scrubland
10	Trail	Wetland and Riparian
11	Trail	Wetland and Riparian
12	Non-trail	Creosote and Bursage Scrub
13	Non-trail	Creosote and Bursage Scrub
14	Non-trail	Creosote and Bursage Scrub
15	Non-trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
16	Non-trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
17	Non-trail	Desert Wash and Terrace / Lower Mojave Woody Scrub
18	Non-trail	Joshua Tree Woodland / Blackbrush Scrubland

19	Non-trail	Joshua Tree Woodland / Blackbrush Scrubland
20	Non-trail	Joshua Tree Woodland / Blackbrush Scrubland
21	Non-trail	Wetland and Riparian



Avian Monitoring

Methods

Point count surveys are done in the spring between April and May and in the Fall or Winter between November and January. Point count surveys are done at each of the 21 HMS plots. Surveys are conducted when birds are most active in the morning and are concluded by 10:00 when bird activity slows down.

Observers survey each location for five minutes and record the data in the Avian Field Data Collection Sheet (below). Data collected includes the observer name, plot number, date, time, habitat type, air temperature, wind speed, wind direction, and cloud cover. For each observation, the species, number of individuals, and distance of the bird from the plot center

are recorded. It is noted whether the observation was visual, auditory, or both. Breeding status and behavior are indicated using the codes on the data collection sheet for copulation, territorial display, distraction display, food carry, fledglings, fecal sac carry, material carry, nest found, and/or pair. It is noted if the observation was a fly over bird and if it is an adult or juvenile, if known.

Rangefinders are used to accurately measure the distance from the observer to the bird. If a bird flushes in response to the observer, the distance to the point from which it flushed is recorded. Surveys are not conducted in weather conditions that reduce detectability (e.g., high winds, heavy fog, or steady rain). Observers are familiar with the vocalizations and plumage characteristics of adult and juvenile birds that are expected to occur at Onyx SVRA.

AVIAN FIELD DATA COLLECTION SHEET

OBSERVER:								Page: of
PLOT#					TEMP:			
DATE:					WIND SPEED:			
TIME:					WIND DIRECTION:			
HABITAT TYPE:					CLOUD COVER:			

Species	# IND	Distance	Estimated/ Range Finder	Visual	Auditory	Breeding Status/ Behavior	Fly Over?	Notes: (i.e. Adult / Juvenile)

Breeding Status: CO = copulation, DI = territorial display, DD = distraction display, FC = food carry, FL = fledglings, FS = fecal sac carry, MC = material carry, NF = nest found, PA = pair

Analysis

Data is entered into an Access database that outputs the data results detailed below. Shannon's diversity index (SDI) and Shannon's evenness (SDJ) are both calculated and are standardized by the number of species recorded. SDJ is calculated on a scale of 0-1 with 1 being completely even. SDI accounts for species abundance and evenness. Higher values of SDI denote higher diversity. Plot values between years are compared with paired 2-tailed t-tests and trail vs non-trail values are compared with standard 2-tailed t-tests. Results are considered significant at $p < 0.05$.

Uncertainties

Avian survey results will vary based on the skills of the biologist. Qualified biologists familiar with the birds in the area perform the surveys. Surveys are not performed during periods of high wind, heavy fog, and/or steady rain which can reduce detectability.

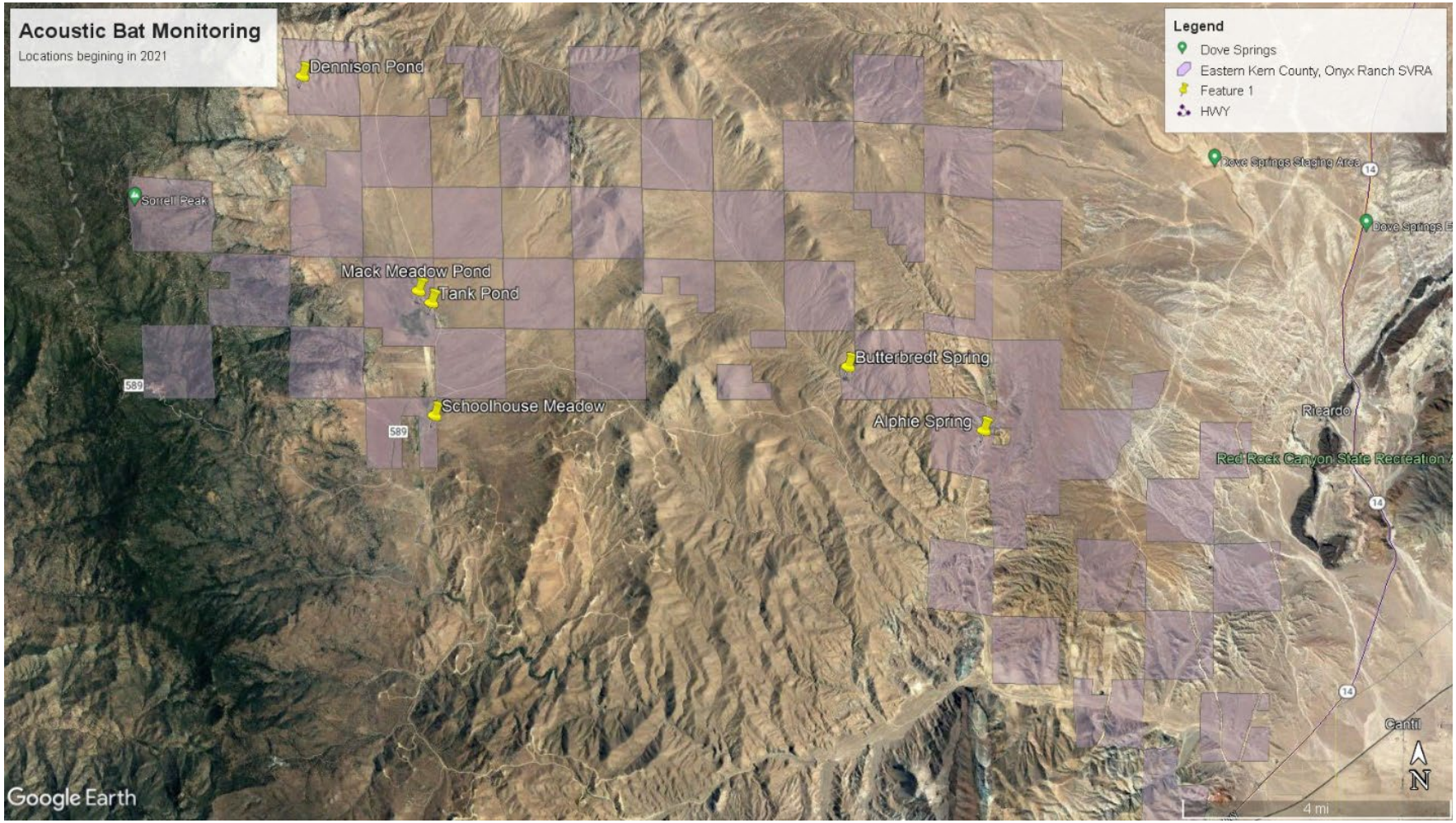
Acoustic Bat Monitoring

Methods

Bat acoustic surveys will be done twice a year in the spring (March-May) and fall (October-November). Bats will be monitored with acoustic recording devices and ultrasonic microphones that record the ultrasonic frequencies of bat calls. Detectors will be placed at six locations near water sources. Locations include Butterbredt Spring, Alphie Spring, Mack Meadow Pond, Tank Pond, Schoolhouse Meadow, and Dennison Pond (see map and coordinates below). Detectors will be placed in a security lock box and attached to wooden peeler poles. Microphones will be elevated above the peeler poles on extendable painter's poles to a height of 10-12 feet depending on the location. All microphone cords will be wrapped around the poles to minimize any auxiliary noise from wind. Detectors will be deployed at each location for at least two weeks and are timed to record 30 minutes before sunset to 30 minutes after sunrise.

Location	Longitude	Latitude
Schoolhouse Meadow	35.37184	-118.21834
Tank Pond	35.39511	-118.21913
Mack Meadow Cabin	35.39777	-118.22239
Butterbredt Spring	35.38184	-118.11343
Alphie Spring	35.36861	-118.07868

Map:


Acoustic Bat Monitoring
Locations begining in 2021
Legend
Dove Springs
Eastern Kern County, Onyx Ranch SVRA
Feature 1
HWY
Dennison Pond
Sorrell Peak
Mack Meadow Pond
Tank Pond
Butterbredt Spring
Schoolhouse Meadow
Alphie Spring
Ricardo
Cantil
589
14
Google Earth
4 mi
N

Analysis

The data is analyzed using the auto identification software of Sonobat 4.4.5. Species with a probability of presence of >75% in Sonobat are manually vetted by park staff. Additionally, species with auto identifications with a probability of <75% are manually vetted if the call had species diagnostic features. A subset of the results processed by park staff is sent to an experienced bat biologist for confirmation.

Uncertainties

Success of acoustic monitoring depends on the level of background noise at the detector locations. Trees, shrubs, and high wind all contribute to background noise and can fill memory cards with files that do not contain bat calls. Microphones are angled away from trees and shrubs as much as possible to reduce noise. Acoustic monitoring only determines presence of the species and analysis is not done on absence or abundance.

Small Mammal Monitoring Program

Methods

Small mammal monitoring is done in the fall (September or October) in Onyx SVRA. The 21 HMS plots are alternated each year so that 10 or 11 of the HMS plots are monitored for small mammals annually. At each site, 36 Sherman live traps are set out in a 6X6 trapping grid and monitored over a three-night trapping period. Traps are spaced out 10m and a pin-flag is placed next to the trap. Traps are baited with mixed birdseed and/or oats mixed with peanut butter and set late in the afternoon. Each trap has a small cloth inside to provide insulation against extreme temperatures. The following morning, they are checked and closed for the remainder of the day to avoid trap mortality for any present diurnal species. For each small mammal individual captured, the species, sex, weight, and external reproductive condition is recorded in the data sheet below.

Small Mammal Trapping Data Sheet

Date:	Start Time:	Temp:	Observers:
Plot #:			

Trap #	Species	Sex	Repro. Status	Weight (G)	Recap	Comments
A1						
A2						
A3						
A4						
A5						
A6						
B1						
B2						
B3						
B4						
B5						
B6						
C1						
C2						
C3						
C4						
C5						
C6						
D1						
D2						
D3						
D4						
D5						
D6						
E1						
E2						
E3						
E4						
E5						
E6						
F1						
F2						
F3						
F4						
F5						
F6						

Analysis

Data is entered into an Access database that outputs the data results detailed below. Density (individuals per hectare) is calculated annually. Additionally, Shannon's diversity index (SDI) and Shannon's evenness (SDJ) are both calculated and are standardized by the number of species recorded. SDJ is calculated on a scale of 0-1 with 1 being completely even. SDI accounts for species abundance and evenness. Higher values of SDI denote higher diversity. Plot values between years are compared with paired 2-tailed t-tests and trail vs non-trail values are compared with standard 2-tailed t-tests. Results are considered significant at $p < 0.05$.

Uncertainties

This survey is not a protocol-level survey for any sensitive wildlife species. Species that are hard to detect due to enigmatic behaviors or are only active during a specific season may not be detected. This survey is aimed towards nocturnal small mammals and does not account for diurnal species such as the Antelope ground squirrel and Mohave ground squirrel.

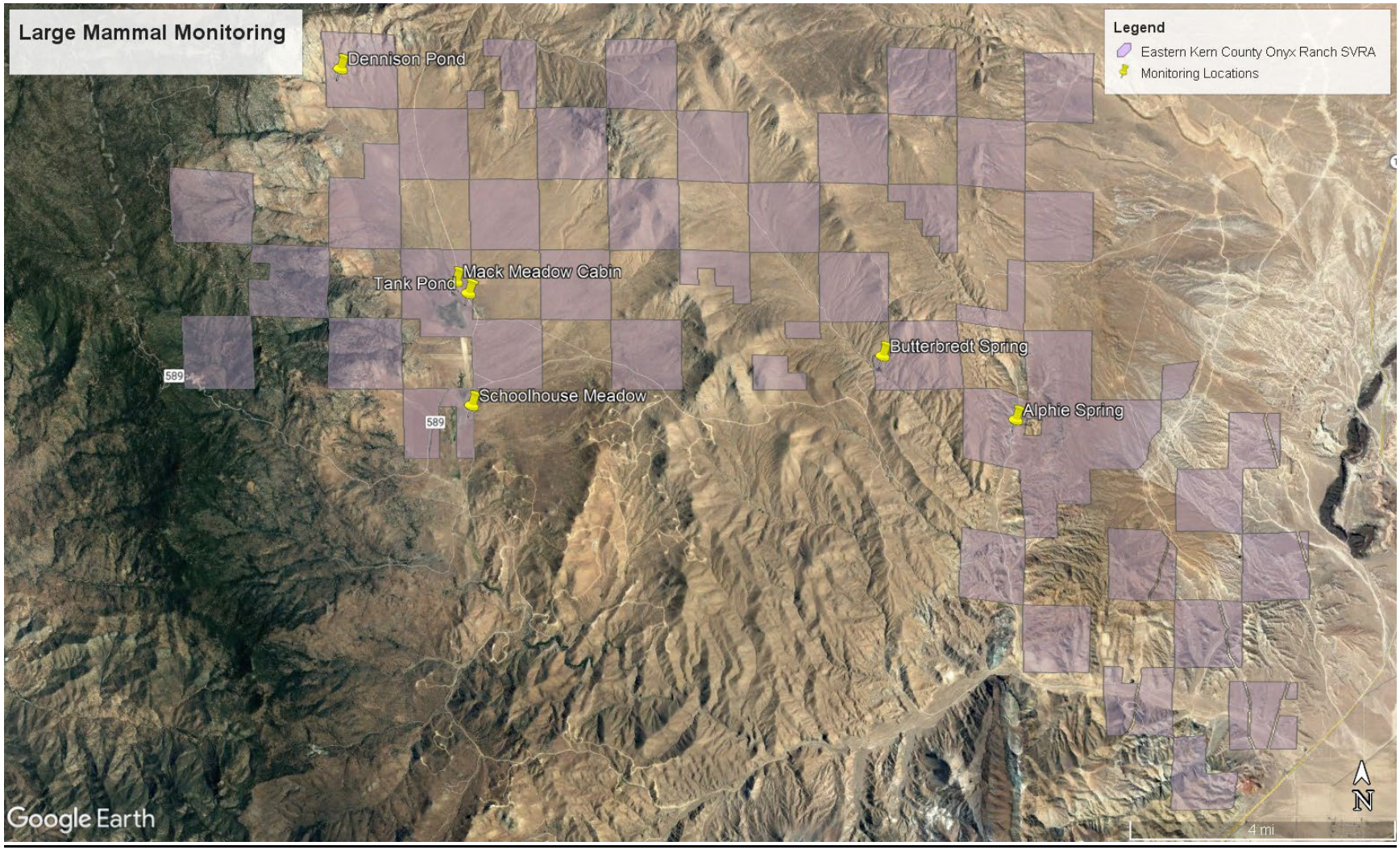
Large Mammal Camera Monitoring Program

Methods

A motion detection wildlife camera system was implemented in July 2017. This system uses fully automatic cameras with a passive infrared motion detector designed specifically for detecting animals in the wild. The cameras are set for continuous twenty-four-hour operation and left at each of the locations for a period of two weeks each year in July or August. Camera locations include two cameras at Butterbredt Spring, two cameras at Alphie Spring, one camera each at Dennison pond, Tank pond, Mack Meadow Cabin pond, and Schoolhouse meadow. Locations are not surveyed in the event that there is no surface water.

Location	Longitude	Latitude
Schoolhouse Meadow	35.37184	-118.21834
Tank Pond	35.39511	-118.21913
Mack Meadow Cabin	35.39777	-118.22239
Butterbredt Spring	35.38184	-118.11343
Alphie Spring	35.36861	-118.07868
Dennison Pond	35.441336	-118.251144

Map:


Large Mammal Monitoring
Legend
Eastern Kern County Onyx Ranch SVRA
Monitoring Locations
Dennison Pond
Mack Meadow Cabin
Tank Pond
Butterbredt Spring
Schoolhouse Meadow
Alphie Spring
589
589
Google Earth
4 mi
N

Analysis

Each species is recorded with the number of species incidents. A time-gap interval of 10 minutes defines a new species incident.

Uncertainties

This large mammal monitoring program can help determine presence, but not absence or abundance of large mammal species. Surveys are dependent on surface water which draws in wildlife to the camera views in an otherwise dry environment. Results vary between years dependent on the surface water and the amount of access points to the water. In some locations, cameras cannot capture the view of all access points to the water source and some species that are present may not be detected.

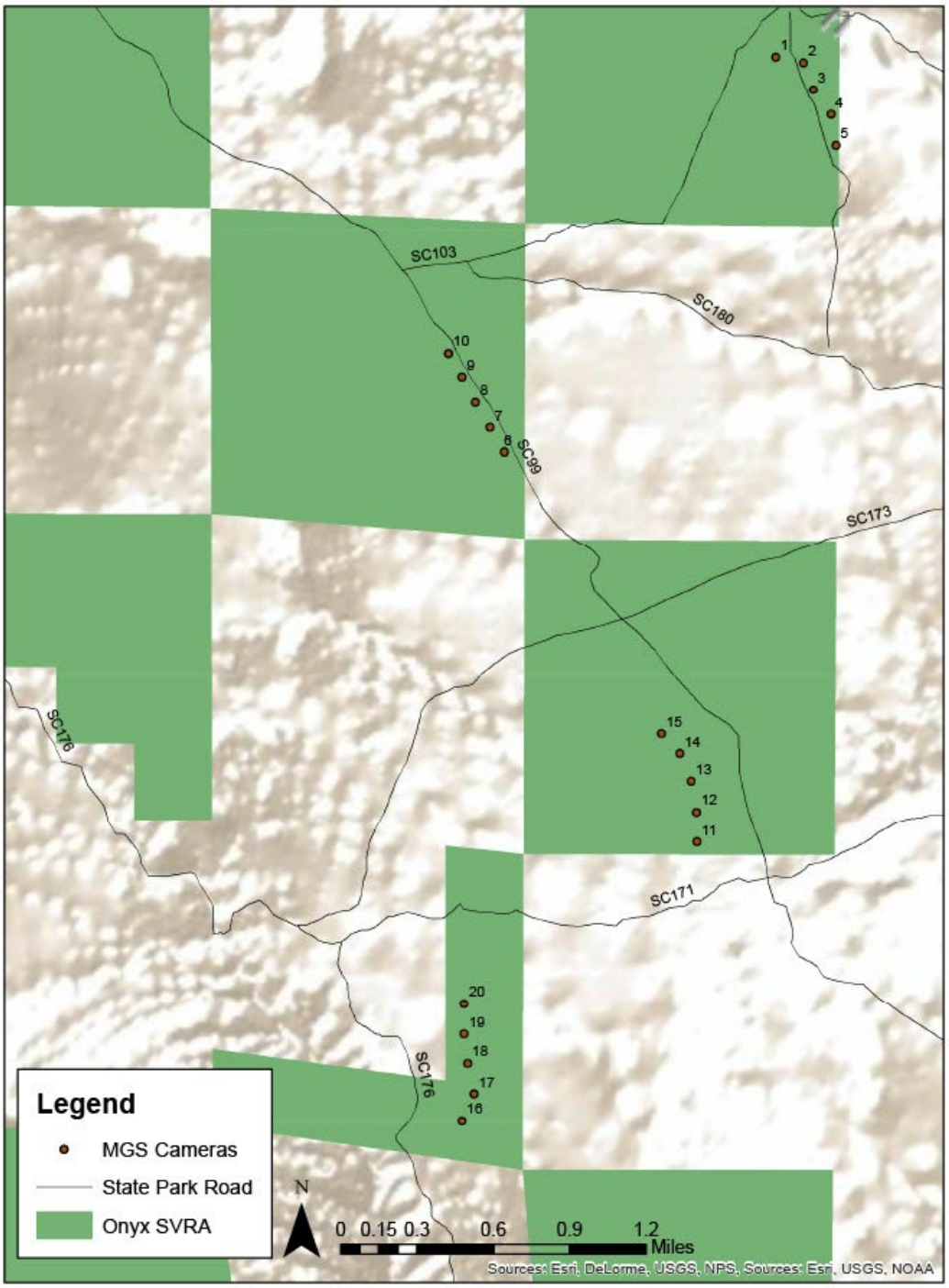
Mohave Ground Squirrel Monitoring

Methods

Mohave ground squirrel presence monitoring is completed each year between March 15th and July 15th. Cameras are installed for three sessions of five full days. Following CDFW recommendations, cameras will be setup during each of the three trapping time-frames, preferably at the start of each timeframe/session (March 15th – April 30th, May 1st – May 31st , and June 1st – July 15th) (CDFW 2023). Twenty total cameras are installed across four HMS plots (plots 8, 7, 20, and 19) in transects of five cameras. Cameras within the transects are spaced out 150 meters. Cameras are baited with four-way livestock grain inside of capped PVC pipes with slits on them. The containers are spray painted to camouflage with the desert environment

Prior to 2024, bait was displayed inside plastic sandwich containers with a wire mesh lid to attract MGS to the camera view. The wire mesh contraption was used to reduce raven activity at the cameras. Bait display containers were updated in 2024 to capped PVC pipes with slits in them to further reduce raven activity. Prior to 2025, monitoring was done only for two five-day sessions between March 15th – May 15th.

MGS Camera Locations



Analysis

The photos are reviewed and the number of MGS photo occurrences at each location are recorded. Incidentally, the type of other diurnal species are recorded. A map showing locations with MGS detections is produced after each survey.

Uncertainties

MGS monitoring can help determine presence, but absence and abundance can't be determined for a given location using these protocols. Results may vary between years due to precipitation levels.

Reptile Monitoring

Methods

Reptile visual encounter surveys are conducted in the spring (generally, March to May) using transect sampling. Each HMS plot is surveyed for one hour, with two transects at 30 minutes each. The transects are in two of the cardinal directions that were randomly selected for each plot during the first year of monitoring (N, E, S, or W). Reptiles observed within a 10-meter wide belt (5 meters on each side of the survey line) are counted. Using the Reptile Field Data Collection Sheet (below), the following data is recorded: plot number, date, weather conditions, air temperature, and surface temperature. For each individual, the station direction, species, sex (if known), age (adult or juvenile), time of observation, and microhabitat of observation is recorded. Microhabitats include bare ground, fence post, Joshua tree, litter, rock, shrub, shrub shade, tree branch, wash, and woody debris.

Distance travelled for each transect is recorded. Each plot is surveyed when reptiles are most active, between 0800-1300. Surveys are not done in adverse weather conditions that cause reptiles to be inactive, including rain, snow, and fog.

The cardinal directions used for each plot are as follows:

Plot Number	**Cardinal Directions**
1	N, E
2	N,W
3	N, E
4	N, E

5	E, W
6	N, S
7	N, W
8	N, W
9	N, W
10	S, W
11	S, E
12	E, W
13	E, W
14	N,S
15	N,W
16	N,E
17	N, S
18	S, W
19	N, E
20	N, W
21	N, W

Reptile Field Data Collection Sheet

Observers:

Plot #: Date: Weather:

Station	Species	Sex (M/F)	Age (A/J)	Air Temp	Sur Temp	Time	Micro Habitat

Distance Traveled:	Station:	Distance:
(in meters)	Station:	Distance:

Analysis

Data is entered into an Access database that outputs the data results detailed below. Density (individuals per hectare) is calculated annually. Additionally, Shannon's diversity index (SDI) and Shannon's evenness (SDJ) are both calculated and are standardized by the number of species recorded. SDJ is calculated on a scale of 0-1 with 1 being completely even. SDI accounts for species abundance and evenness. Higher values of SDI denote higher diversity. Plot values between years are compared with paired 2-tailed t-tests and trail vs non-trail values are compared with standard 2-tailed t-tests. Results are considered significant at $p < 0.05$.

Uncertainties

Visual reptile survey results will vary based on the skill of the observer. Qualified biologists familiar with the local species perform the surveys within the Park. High wind and temperature can influence the detectability of reptiles.

Amphibian Monitoring

Methods

Visual encounter surveys are done at all of the known aquatic features in the park following a protocol adapted from Fellers and Freel 1995. Aquatic features are surveyed in the day during the early spring to late summer. Surveys are not conducted in rain or cold weather that can impede amphibian activity. Surveys are done from mid-morning to late-afternoon. The objective of these aquatic surveys is to establish a baseline species list for the park. The following guidelines are followed:

- Visual surveys are started with scanning the banks of the aquatic feature from an appropriate distance so as not to disrupt basking behavior. The use of binoculars allows the surveyor to locate species before they jump into the water. Begin the survey by scanning the banks, exposed rocks, floating vegetation, sheltered spots, etc.
- After scanning with binoculars and recording species and number of individuals observed, begin walking slowly towards the aquatic feature. Visually search the banks, rocks, logs, pond bottom (if water clarity permits), and the surface of floating vegetation within a few meters of the surveyor's location. Visually search for eggs and egg-clusters. If needed, use a net to identify/catch amphibian/larvae for identification. All life history stages and numbers are recorded for each species (e.g., eggs, larvae, sub-adults, adults).
- Survey ponds by having one person walk around the pond periphery or two people walking around the periphery in opposite directions. For streams, which are less than 3m wide in Onyx SVRA, have one person walk upstream to avoid turbidity or have two

people walk in opposite directions (up or downstream). Survey by walking in the water, or if necessary, along the banks.

- Record the total survey time for when you are actively searching for amphibians. If there is sufficient suitable habitat, surveys should be done for a minimum of two-person hours. Many, if not all, aquatic features at Onyx SVRA are not large enough for two-hour searches.

Per our scientific collection permit S-192530002-19254-001-01, the following protocols will be followed:

Capture methods shall avoid disturbing native reptile and amphibian eggs and egg masses. Amplexing or mating pairs of native amphibians and reptiles shall not be captured, handled, or disturbed.

Amphibians shall be handled with wet hands that are free of lotions, creams, sunscreen, oils, ointment, insect repellent or any other material that may harm them.

You shall process individuals expediently. Larval amphibians shall not be handled out of the water for longer than 30 seconds unless rewetted, and shall not be retained for longer than five (5) minutes for processing. Adult and juvenile amphibians and reptiles shall be released immediately if they exhibit signs of excessive physiological stress or if handling time exceeds one (1) hour.

All amphibians and reptiles shall be released at the point of capture, unless the Department issues written permission to move them (see Condition #10, below), or unless that location puts them in imminent danger, in which case they shall be placed in a nearby refugium sufficient to protect them.

Any habitat element (e.g., rocks, boulders, and logs) moved to survey for reptiles or amphibians shall be placed back exactly where they were found to avoid negative impacts on habitat conditions.

All capture and handling methods utilized shall follow standard practices and ensure no undue disturbance of the authorized amphibian and reptile species of special concern (ARSSC) and other wildlife species.

Threatened, Endangered, CESA-candidate, or non-target ARSSC that are incidentally captured shall be immediately released at the site of capture and reported to the California Natural Diversity Database at least annually.

If handling of a species is needed for identification, information is recorded and reported for the Mandatory Wildlife Report Form of our Scientific Collection Permit. All captured wildlife are recorded on the form. If Western pond turtles, California legless lizards, California glossy snakes,

or other special status species are incidentally captured, the information required for the annual report for the SCP will be recorded and submitted.

Disinfection protocols:

Per our scientific collection permit, equipment is disinfected by following the "Decontamination Protocol for Field Work with Amphibians and Reptiles in Canada". The protocol is available at: https://www.cwhc-rcsf.ca/docs/HHWG%20Decontamination%20Protocol%202017-05-30.pdf.

Supplies Needed:

- Waterproof boots and/or waders
- Notebook
- Pen
- Ruler
- Nets
- Guidebook
- Binoculars
- Bleach
- Tap Water
- Scrub Brush
- Pump Sprayer
- Gloves

Analysis

Aquatic visual encounter surveys provide information on the species present at each water body but does not prove species absence. This data is used to inform the species list for the park and inform management.

Uncertainties

Aquatic visual encounter survey results will vary based on the skill of the observer. Qualified biologists familiar with the local species perform the surveys within the Park. Since these methods do not prove absence of special status species, more detailed surveys, including nocturnal surveys, should be done in the event that a project is proposed in aquatic areas.

Vegetation Monitoring

Methods

Annual vegetation monitoring at the 21 HMS plots follows the California Native Plant Society relevé vegetation sampling technique in the spring when vegetation is at or near the peak

phenology. Using the Relevé Vegetation Field Data Form below, information about each plot's location, habitat, and vegetation composition are recorded. Each plot is $30m^2$ with rebar or wood stakes (in open areas) marking the four corners. The same vegetation plots are monitored each year. Every species in the plot is recorded and the percent cover is estimated. The following information is recorded for each section:

- Location/Environmental Description:
    - Plot corner coordinates
    - Two reference photos of the HMS plots are taken at specific coordinates.
    - Aspect, slope, and elevation
    - Percent surface cover of water, basal area stems, litter, bedrock, boulder, stone, cobble, gravel, and fines
    - Current percent bioturbation and the presence of past bioturbation
    - Percent hoof punch
    - Fire evidence
    - Site history
    - Disturbance level
- Habitat Description:
    - Vegetation type and alliance
    - Canopy (open, partially closed, or closed)
    - Phenology (early, peak, or late)
    - Tree diameter at breast height, herbaceous height, shrub maturity, desert riparian tree and shrub stand average stem heights, desert Joshua tree mean stem height
    - Adjacent vegetation type and direction
    - Adjacent land use and direction
    - Topography description
- Vegetation Description:
    - Percent of nonvascular and vascular vegetation cover
    - Percent cover and height class of conifer, hardwood, and regeneration trees
    - Percent cover and height class of shrubs and herbs
    - Percent cover of each species within the plot for each stratum (tree, sapling, seedling, shrub, herb, non-vascular)

Releve Vegetation Field Data Form

Project:	Field Plot:	Date:
	Name of recorder:	
	Other Surveyors:	

I. LOCATION/ENVIRONMENT DESCRIPTION

Plot Corner GPS Coordinates:	**NW:**	**Photo #1 Reference Number:**
(Decimal Degrees)	**NE:**	**Photo #1 GPS Coordinates:**
	SW:	**Photo #2 Reference Number:**
	SE:	**Photo #2 GPS Coordinates:**

Plot Size (m^2): **Plot Shape: _____ x _____m**

Aspect/Exposure, Actual °: _____ (circle one) **NE NW SW SE Flat Variable**

Slope/Steepness, Actual °: _____ (circle one) **0° 1-5 ° >5-25° >25 °**

Elevation:

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

H_20: BA Stems: Litter: Bedrock: Boulder: Stone: Cobble: Gravel: Fines: =100%

% Current year bioturbation:____ Past bioturbation present? Yes / No % Hoof punch ____

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

Site history, disturbances, comments:

Disturbance level: Low Medium High (circle one)

II. HABITAT DESCRIPTION

Vegetation Type:

Vegtation Alliance:

Canopy: ____Open ____Partially Closed ____Closed

Phenology: ____Early ____Peak ____Late

If tree canopy is >10% total cover, circle one- **Tree DBH: T1** (<1"), **T2** (1-6"), **T3** (6-11"), **T4** (11-24"), **T5** (>24"), **T6 (**multi-layored)

If cover exceeds 2%, circle one- **Herbaceous : H1** (<12" plant ht. at maturity) **H2** (>12" ht. at maturity)

Shrub: **S1** seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Desert Riparian Tree Stand Average Stem Height circle one**: 1** (<2ft. Stem ht.), **2** (2-10 ft. ht), **3** (10-20ft. ht.) **4** (>20ft.ht.)

Desert Riparian Shrub Stand Average Stem Height circle one**: 1** (<2ft. Stem ht.), **2** (2-10 ft. ht), **3** (10-20ft. ht.) **4** (>20ft.ht.)

Desert Joshua Tree Mean Stem Height circle one**: 1** (<1.5" base diameter) **2** (1.5-6" diam.), **3** (>6" diam.)

Adjacent Vegetation Type(s)/direction:

Adjacent Land Use/direction:

Topography: Macro: top upper mid lower bottom (circle one)

Micro: convex flat concave undulating (circle one)

Releve Vegetation Field Data Form

SPECIES SHEET | Page 2

Project: | Field Plot: | Date:

III. 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=6-10m, 6=10-15m, 7=15-20m, 8=20-35m, 9=35-50m, 10=>50

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

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

Stratum	Species	% cover	Collection taken?	Final Species Identification

Unusual species:

Releve Vegetation Field Data Form

SPECIES SHEET CONTINUED | Page 3

Project: | Field Plot: | Date:

IV. CONITNUED VEGETATION DESCRIPTION

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

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

Stratum	Species	% cover	Collection taken?	Final Species Identification

Unusual species:

Analysis

Data is entered into an Access database that outputs the data results detailed below. Average vegetation percent cover is calculated for both trail and non-trail HMS plots as well as for all HMS plots combined. Mean native and non-native percent cover is calculated. Plot values between years are compared with paired 2-tailed t-tests and trail vs non-trail values are compared with standard 2-tailed t-tests. Results are considered significant at $p < 0.05$.

Additionally, each plot's percent vegetation cover is sorted into cover classes to reduce differences between surveyors throughout the years. Vegetation cover class refers to percentage classes of non-native and native plant species such as >75-100%, >50-75%, >25-50%, >15-25%, >5-15%, 1-5%, <1%, and trace. These cover classes are compared between years at the plot level for native and non-native vegetation.

Uncertainties

Estimates of percent cover can vary between observers. Results of percent cover are categorized into ranges to reduce variability between years.

Rangeland Health Assessments

Rangeland Health Assessments are part of the monitoring guidelines included in the grazing lease (CDPR 2015a) that the BLM implements within their allotments (BLM 2000).

Baseline

Previous surveys and baseline information for adjacent BLM lands is not available so baseline information for the Park will be determined in 2025.

Methods

Assessments will be done annually using the BLM protocol within "Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management" (BLM 2000). The form below, which has been adapted from the BLM form (BLM 2021), will be completed for each assessment. The health assessments look at standards indicating rangeland health. Specifically, there are standards for soils, species, riparian, and water quality. Each standard is assessed and rated into categories indicating if a standard is met, not met, and whether progress is being made. Detailed descriptions of the standards can be found in the form below. If standards are not met, management actions will be taken as outlined in the grazing lease (CDPR 2015a). Rangeland Health Assessment locations will be determined in 2025 during the first year of monitoring. At a minimum, these locations will include Schoolhouse Meadow, Mackmeadow Cabin area and pastures, Dennison Pond and Kelso Valley, and the combined Dove Springs/ Jawbone Canyon pastures. Each location will be resurveyed annually.

Uncertainties

2025 will be the first year of implementing this monitoring program in Onyx SVRA. Depending on the results of the surveys, the protocol might be adapted over time to better fit the Park's needs.

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

ASSESSMENT AND EVALUATION OF RANGELAND HEALTH STANDARDS, SIGNIFICANT FACTORS AND APPROPRIATE ACTIONS

This form documents, for the indicated area: information sources used in the evaluation, a summary of the data used to ascertain whether standards are achieved, a list of standards and/ or objectives evaluated, the indicators used to evaluate whether standards are achieved, and conclusions drawn by the interdisciplinary (ID) team.

Indicate the date(s) or period the assessment occurred: _____

Authorized grazing season of use: _____

IDENTIFICATION OF RELEVANT AREA:

Describe and indicate the area where these evaluations and rationale apply:

Landscape (identify by planning area, pasture, or by watershed):

Survey Site (Allotment or Pasture – list name/no./acres):

Stratification (Specific area of the Survey Site with unique resources where this assessment is applicable):

Rationale for choosing stratification:

_____

_____

_____

Approximate size in acres and % of Survey Site (allotment or pasture) or linear length if lotic riparian:_____

Number of Strata for this Survey Site:_____

CDPR STAFF PARTICIPANTS:

_____

_____

_____

DOCUMENTATION OF THE INVOLVEMENT OF PREMITTEES, STATE AGENCIES AND THE INTERESTED PUBLIC IN MAKING STANDARDS CONFORMANCE AND CONTRIBUTING FACTORS DETERMINATION Indicate the occurrence of public participation (e.g. permittee, interested public, other Federal or State/local agency), or opportunities for public participation that pertains to the review of standards achievement and contribution factors (who, when, and conversation or meeting summary).

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

SUMMARY OF STANDARDS ACHIEVEMENT AND RATIONALE

A field examination by an ID team indicated the following with regard to standards achievement for the area identifies:

Standard **Conclusion of Standard Achievement** (from WO IM 2012-124, check appropriate box for each standard)

Soils

- ☐ Met
- ☐ Not met, significant factor undetermined
- ☐ Not met, significant factor is Non-CDPR or not CDPR authorized
- ☐ Not met, current management or disturbances are affecting land health
- ☐ Not met, current management or disturbances are affecting land health, but ways to achieve significant progress are unknown.
- ☐ Not met, current management or disturbances have been changed to address significant factors in order to result in significant progress towards achieving.
- ☐ Not met, current management or disturbances are appropriate and monitoring data indicates making significant progress towards achieving.
- ☐ Public land where land health standards do not apply.

Rationale: (if not met, include possible significant factor(s), the magnitude of effects, and explanations for selections)

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Standard **Conclusion of Standard Achievement** (from WO 1M 2012-124, check appropriate box for each standard)

Species

- ☐ Met
- ☐ Not met, significant factor undetermined
- ☐ Not met, significant factor is Non-CDPR or not CDPR authorized
- ☐ Not met, current management or disturbances are affecting land health
- ☐ Not met, current management or disturbances are affecting land health, but ways to achieve significant progress are unknown.
- ☐ Not met, current management or disturbances have been changed to address significant factors in order to result in significant progress towards achieving.
- ☐ Not met, current management or disturbances are appropriate and monitoring data indicates making significant progress towards achieving.
- ☐ Public land where land health standards do not apply.

Rationale: (if not met, include possible significant factor(s), the magnitude of effects, and explanations for selections)

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Standard **Conclusion of Standard Achievement** (from WO 1M 2012-124, check appropriate box for each standard)

Riparian

- ☐ Met
- ☐ Not met, significant factor undetermined
- ☐ Not met, significant factor is Non-CDPR or not CDPR authorized
- ☐ Not met, current management or disturbances are affecting land health
- ☐ Not met, current management or disturbances are affecting land health, but ways to achieve significant progress are unknown.
- ☐ Not met, current management or disturbances have been changed to address significant factors in order to result in significant progress towards achieving.
- ☐ Not met, current management or disturbances are appropriate and monitoring data indicates making significant progress towards achieving.
- ☐ Public land where land health standards do not apply.

Rationale: (if not met, include possible significant factor(s), the magnitude of effects, and explanations for selections)

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Standard **Conclusion of Standard Achievement** (from WO 1M 2012-124, check appropriate box for each standard)

Water Quality

- ☐ Met
- ☐ Not met, significant factor undetermined
- ☐ Not met, significant factor is Non-CDPR or not CDPR authorized
- ☐ Not met, current management or disturbances are affecting land health
- ☐ Not met, current management or disturbances are affecting land health, but ways to achieve significant progress are unknown.
- ☐ Not met, current management or disturbances have been changed to address significant factors in order to result in significant progress towards achieving.
- ☐ Not met, current management or disturbances are appropriate and monitoring data indicates making significant progress towards achieving.
- ☐ Public land where land health standards do not apply.

Rationale: (if not met, include possible significant factor(s), the magnitude of effects, and explanations for selections)

_____

_____

_____

1D team's management recommendations including suggested appropriate action(s), if applicable:

_____

_____

_____

_____

_____

I acknowledge receipt of this evaluation and management recommendations provided.

District Environmental Coordinator:_____Date:_____

If this Evaluation Report documents that standards are not achieved in the assessment area, then authorized officer needs to determine (in a separate signed Determination Document) the significant casual factors for non-achievement. If existing grazing management practices or levels of grazing use on public lands are significant factors, then an appropriate action must be developed and implemented in accordance with 43 CFR subpart 4180.2(c). (WO IM 2009-007)

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

STANDARDS ASSESSMENT BASE INFORMATION

Standards excerpted from: Record of Decision, Central California Standards for Rangeland Health and Guidelines for Livestock Grazing Management. BLM California State Office. June 1999.

STANDARD: SOILS

Soils exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and landform.

Meaning That: Precipitation is able to enter the soil surface at appropriate rates. The soil is adequately protected against accelerated erosion, and the soil fertility is maintained at the appropriate levels.

Site Data: Soil Survey Area(s):_____

STANDARD: SPECIES

Healthy, productive, and diverse populations of native species, including special status species (Federal T&E, Federal proposed, Federal candidates, or California State T&E) are maintained or enhanced where appropriate.

Meaning That: Native and other desirable plants and animals are diverse, vigorous, able to reproduce and support the hydrologic cycle, nutrient cycles and energy flows over space and time.

Plant Community(ies):_____

CWHR Habitat/Stage:_____

Key Indicator Species Chosen:_____

Focused Studies:(ongoing or needed):_____

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

STANDARD: RIPARIAN

Riparian/wetland vegetation, structure and diversity and stream channels and floodplains are, or are making significant progress toward, functioning properly, and achieving an advanced ecological status.

Meaning That: The vegetation and soils interact to capture and pass sediment, sustain infiltration, maintain the water table, stabilize the channel, sustain high water quality, and promote biodiversity appropriate to soils, climate, and landform.

Riparian Habitat Community:_____

Ecological/Seral Stage(s):_____

STANDARD: WATER QUALITY

Surface and groundwater quality complies with California, or other appropriate (e.g. Tribal) water quality standards.

Meaning That: CDPR actions do not contribute to pollution that violates the quantitative or narrative standards of the California water quality standards. Approved Best Management Practices (BMPs) are used to protect water quality or restore water quality to water bodies not fully supporting designated beneficial uses, e.g., water quality limited segments.

Surface and groundwater comply with the objectives of the Clean Water Act and other applicable water quality requirements, including meeting the State standards within the respective boundaries of the State of California.

Watershed:_____ CWA 303(d) impaired water body: Yes / No

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

CURRENT AND SEASONAL CLIMATIC CONDITIONS:

Description of Resources/Rational for Conclusion	Standard Indicator	Applicable Standards (un-shaded) and Conclusion (write Met, Not met or N/A)			
		Soils	Species	Riparian	Water Quality
Generally described the amount and distribution of ground cover: Bare Ground____% Herbs_____% Trees_____% Rock/Other_____%	Is ground cover (vegetation and other ground cover such as rock) sufficient to protect sites from accelerated erosion?				
Is organic matter level acceptable? Yes, No, N/A Heavy materials present in uplands? Yes, No, N/A Heavy materials present in riparian? Yes, No, N/A	Is adequate organic matter (litter/RDM & standing plant material) evident in sufficient amounts to protect the soil surface and replenish soil nutrients through decomposition?				
Trees Dom Cover spp:_____ _____ Growing periods: single, or variety? Shrubs: Dom Cover spp:_____ _____ Growing periods: single, or variety? Herbs: Dom Cover spp:_____ _____ Growing period: single, or variety? Roots: Throughout, absent portions, only one	Are a diversity of plant layers exhibiting appropriate phenological stages with multiple rooting depths present? (i.e. is there a component missing indicating ineffective capture and utilization of available nutrients and energy?)				
(see Table 4-1 Rangeland Health) Soil movement C1 C2 C3 C4 C5 Surface litter C1 C2 C3 C4 C5 Pedestaling C1 C2 C3 C4 C5 Flow patterns C1 C2 C3 C4 C5 Rills/Gullies C1 C2 C3 C4 C5	**Is there minimal evidence of accelerated erosion** in the form of rills, gullies, pedestaling of plants or rocks, flow patterns, physical soil crusts/surface sealing, or compaction layers below the soil surface?				
Cryptograms observed: _____ Distribution/where found: Communities Intact / Fragmented: (describe disturbances noted and magnitude)	Are biological (microphytic, cryptogamic) soil crusts in place where expected and not excessively disturbed or fragmented in those locations?				
Desired or priority plant communities and habitats present: (any missing?)	Where appropriate, does species composition contribute to desired or priority plant community objectives?				

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

PERENNIAL VEG: Spp:_____:All ages represented; Seedlings/youngs missing; Mostly old/decadent Spp:_____:All ages represented; Seedlings/youngs missing; Mostly old/decadent Spp:_____:All ages represented; Seedlings/youngs missing; Mostly old/decadent RIPARIAN VEG: Spp:_____:All ages represented; Seedlings/youngs missing; Mostly old/decadent Spp:_____:All ages represented; Seedlings/youngs missing; Mostly old/decadent	Is **age-class and age-structure** of woody/riparian/or perennial vegetation diverse and appropriate for the site?				
Description of Resources/Rational for Conclusion	**Standard Indicator**	**Applicable Standards (un-shaded) and Conclusion (write Met, Not met or N/A)**			
		Soils	Species	Riparian	Water Quality
VIGOR: (Good= growing/reproducing, Fair=Not uniform/consistent, Poor=most stunted, weak) and **FORM**: (Good=normal structure, Fair=developing abnormal, Poor=Most in abnormal) spp:_____ VIGOR: Good Fair Poor Why? FORM: Good Fair Poor; Why? spp:_____ VIGOR: Good Fair Poor Why? FORM: Good Fair Poor; Why? spp:_____ VIGOR: Good Fair Poor Why? FORM: Good Fair Poor; Why?	Is **plant vigor** adequate to maintain desirable plants and ensure reproduction and recruitment of plants when favorable climatic events occur?				
Describe distribution of plant species and habitats: (Well distributed where expected; becoming fragmented within expected area; abnormally clumped into localized pockets) spp:_____ Well distrib./ Fragmented/ Clumped spp:_____ Well distrib./ Fragmented/ Clumped spp:_____ Well distrib./ Fragmented/ Clumped	Does the **spatial distribution** and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events?				
Describe indicators of germination microsites for key species: (Seem present across area;	Are germination microsites for key species available?				

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Degraded microsites; Germination seems inhibited) Why?					
Natural disturbances noted:	Is appropriate natural disturbance evident?				
Any noxious/invasive weeds on CDFA's Noxious Weed list? spp:_____% Cover_____ spp:_____% Cover_____ spp:_____% Cover_____	Are noxious and invasive species at acceptable levels?				
Any non-native plants or animals? spp:_____ Acceptable? Yes No spp:_____ Acceptable? Yes No spp:_____ Acceptable? Yes No	Are levels of non-native plants and animals at acceptable levels?				
Description of Resources/Rational for Conclusion	**Standard Indicator**	**Applicable Standards (un-shaded) and Conclusion (write Met, Not met or N/A)**			
		Soils	Species	Riparian	Water Quality
Special status species **with potential to be present**: SSS:_____ Overall population: Up / Down / Stable / Unknown Habitat: Good / Fair / Poor / Unknown Connected: Yes / No Comments: SSS:_____ Overall population: Up / Down / Stable / Unknown Habitat: Good / Fair / Poor / Unknown Connected: Yes / No Comments: SSS:_____ Overall population: Up / Down / Stable / Unknown Habitat: Good / Fair / Poor / Unknown Connected: Yes / No Comments: SSS:_____ Overall population: Up / Down / Stable / Unknown Habitat: Good / Fair / Poor / Unknown Connected: Yes / No Comments:	Are the special status species **that are present,** healthy and in numbers that appear to ensure stable to increasing populations? Are habitat areas large enough to support viable populations, or connected adequately with other similar habitat areas, to be capable of supporting healthy populations?				
Wildlife habitat: Seral Stage: _____ Appropriate? Yes / No Structure: Good / Fair / Poor, Why?	Do wildlife habitats include seral stages, vegetation structure, and patch size promoting diverse, viable wildlife populations?				

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Patch size: Adequate / Inadequate					
(see PFC checklist) _____% habitat PFC _____% habitat At Risk (Up, Down, Static) _____% habitat Non-Functional	Are Riparian/Wetland Habitat(s) in Proper Functioning Condition				
Describe cover of riparian banks:	Is vegetation cover >80% or the percentage that will protect banks and dissipate energy during high flows				
Describe shading of riparian area: Herbs: Yes / No Shrubs: Yes / No Trees: Yes / No	Where appropriate, is shading sufficient to provide adequate thermal regulation for fish and other riparian dependent species?				
Describe aquatic organisms and plants present: Fish: Yes / No Algae: Yes / No Any Invertebrates: Yes / No Do they indicate: Good Quality / Poor Quality	Do aquatic organisms and plants (macro-invertebrates, fish, algae, and plants) indicate support for beneficial use?				
Is Riparian habitat quality Acceptable or Unacceptable? (see riparian standard)	Does Riparian Habitat quality contribute to beneficial uses?				

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Lentic Area Standard Proper Functioning Condition Checklist

Name of Riparian-Wetland Area:_____

Date: _____ Area/Spring ID:_____ Acres:_____

ID Team Observers:_____

Yes	No	N/A	HYDROLOGIC
			1) Riparian-wetland area is saturated at or near the surface or inundated in "relatively frequent" events
			2) Fluctuation of water levels is not excessive
			3) Riparian-wetland area is enlarging or has achieved potential extent
			4) Upland watershed is not contributing to riparian-wetland degradation
			5) Water quality is sufficient to support riparian-wetland plants
			6) Natural surface or subsurface flow patterns are not altered by disturbance (i.e. hoof action, dams, dikes, trails, roads, rills, gullies, drilling activities)
			7) Structure accommodates safe passage of flows (e.g. no headcut affecting dam or spillway)

Yes	No	N/A	VEGETATION
			8) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for maintenance/recovery)
			9) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery)
			10) Species present indicate maintenance of riparian-wetland soil moisture characteristics
			11) Vegetation is comprised of those plants or plant communities that have root masses capable of withstanding wind events, wave flow events, or overland flows (e.g., storm events, snowmelt)
			12) Riparian-wetland plants exhibit high vigor
			13) Adequate riparian-wetland vegetative cover is present to protect shoreline/soil surface and dissipate energy during high wind and wave events or overland flows
			14) Frost or abnormal hydrologic heaving is not present
			15) Favorable microsite condition (i.e. woody material, water temperature, etc.) is maintained by adjacent site characteristics

Yes	No	N/A	EROSION/DEPOSITION
			16) Accumulation of chemicals affecting plant productivity/composition is not apparent
			17) Saturation of soils (i.e. ponding flooding frequency, and duration) is sufficient to compose and maintain hydric soils
			18) Underlying geologic structure/soil material/permafrost is capable of restricting water percolation
			19) Riparian-wetland area is in balance with the water and sediment being supplied by the watershed (i.e. no excessive erosion or deposition
			20) Islands and shoreline characteristics (i.e., rocks, coarse and/or large woody material) are adequate to dissipate wind and wave event energies.

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Remarks

_____
_____
_____
_____
_____
_____
_____
_____

Summary Determination

Functional Rating:

Proper Functioning Condition _____

Functional – At Risk _____

Nonfunctional _____

Unknown _____

Trend for Functional – At Risk:

Upward_____

Downward_____

Not Apparent_____

Are factors contributing to unacceptable conditions outside the control of the manager?

Yes _____

No _____

If yes, what are those factors?

_____ Dewatering

_____ Mining activities

_____ Watershed condition

_____ Dredging activities

_____ Road Encroachment

_____ Land ownership

_____ Other (specify) _____

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Table 4-1 Surface Soil Characteristics (according to BLM BMP)

Characteristic	Class 1	Class 2	Class 3	Class 4	Class 5
Soil movement	Subsoil exposed over much of the area; may have embryonic dunes and wind-scoured depressions	Soil and debris deposited against minor obstructions	Moderate movement of soil is visible and recent; slight terracing	Some movement of soil particles is in evidence	No visual evidence of soil movement
Litter and/or Surface rock	Very little **litter** is remaining (use care on low productivity sites); if present, **surface rock or fragments** exhibit some movement and accumulation of smaller fragments behind obstacles	Extreme **litter** movement is apparent; large and numerous deposits against obstacle; if present, **surface rock or fragments** exhibit some movement and accumulation of smaller fragments behind obstacles	Moderate **litter** movement is apparent and **surface rock or fragments** are deposited against obstacles; if present, rock, or fragments have a poorly developed distribution pattern	May show slight **litter** movement; if present, coarse **surface rock or fragments** have a spotty distribution caused by wind or water	Accumulation of **litter** in place; if present the distribution of **surface rock or fragments** shows no movement cause by wind or water
Pedestaling	Most rocks and plants are pedestaled and roots exposed	Rocks and plants on pedestals are generally evident; plant roots are exposed	Small rocks and plant pedestals occurring in flow patterns	Slight pedestaling in flow patterns	No visual evidence of pedestaling
Water Flow patterns (across soil surface during overland flow)	Flow patterns are numerous and readily noticeable; may have large barren fan deposits	Flow patterns contain silt, sand deposits and alluvial fans	Flow patterns are well defined, small, and few with intermittent deposits	Deposition of particles within flow patterns may be in evidence	No visual evidence of flow patterns
Rills (small erosional rivulets) **And Gullies** (channels with intermittent flows)	**Rills** may be present at depths 3 to 6 inches and intervals of less than 5 inches; **Gullies** are sharply incised and cover most of the area and 50 percent are actively eroding	**Rills** at depths of 0.5 to 6 inches occur in exposed areas at intervals of 5 feet; **Gullies** are developed, with active erosion along 10 to 50 percent of their lengths or a few well-developed gullies with active erosion along more than 50 percent of their length	**Rills** at depths of 0.5 to 6 inches occur in exposed places at approximately 10 foot intervals; **Gullies** are well developed, with active erosion along less than 10 percent of their length; some vegetation may be present on channel slopes	Some **Rills** in evidence at infrequent intervals of over 10 feet; **Gullies** show little bed or slope erosion; some vegetation is present on channel slopes	No visual evidence of **Rills**; **Gullies** may be present in stable condition; vegetation on channel bed and side slopes

This form was adapted from the BLM Rangeland Health Assessment Form used during the 2021 surveys by the Bakersfield Field Office available at EplanningUi (blm.gov).

Onyx SVRA Special Status Species

A wildlife and vegetation species inventory is located in the Wildlife and Habitat Protection Plan. A special status wildlife and plant inventory for the Park was initially compiled using data from park surveys as well as reports generated from the CDFW California Natural Diversity Database (CNDDB), United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Rare Plant Inventory. The IPAC search referenced a 5-mile buffer zone enclosing and surrounding the Park footprint to ensure nearby occurrences were captured of similar habitat types. For CNDDB and CNPS, each quadrant encompassing or adjacent to the Park was searched, resulting in a 20 quadrant inventory (CINCO, CROSS MOUNTAIN, DOVE SPRING, PINYON MOUNTAIN, SALTDALE NW, CRANE MOUNTAIN, FREEMAN JUNCTION, HORSE CANYON, CANTIL, CALIFORNIA CITY N, LAKE ISABELLA S, WOOLSTALF CREEK, LORAINE, PIUTE PEAK, CLARAVILLE, EMERALD MTN., CACHE PEAK, MOJAVE NE, TEHACHAPI NE). These sources were accessed on May 5, 2022 and saved for future reference.

References

2021. Rangeland Health Assessment: Nicoll Spring. Ridgecrest Field Office and Bakersfield Field Office. EplanningUi (blm.gov) Accessed February 2024.

Forage Utilization Surveys

Baseline

Previous surveys and baseline information for adjacent BLM lands is not available so baseline information for the Park will be determined in 2025.

Methods

Forage utilization is the percent by weight of the plant that is consumed or destroyed by animals (USDA et al. 1996). Forage utilization will be determined for salt grass, sedges, rushes, willow, and cottonwood in the riparian areas of the grazing pastures. Surveys will be conducted during the spring growing season between March 1st and May 31st for riparian areas. Additional surveys will be done for perennial species in the Mojave Desert for those pastures grazed during the dormant season.

Utilization is assessed following the "Qualitative Assessments- Landscape Appearance Method" of the USDA et al. "Utilization Studies and Residual Measurements Interagency Technical Reference". This protocol "uses an ocular estimate of forage utilization based on the general appearance of the rangeland. Utilization levels are determined by comparing observations with written descriptions of each utilization class" (USDA et al. 1996). Surveyors complete the USDA Landscape Appearance form below by walking a transect and estimating the utilization class at each point. Transect length, location, and the distance between survey points along the transect will be determined in 2025 during the first year of surveys. There are different descriptions of the classes/ranges of percent utilization depending on if the forage is browse plants (shrubs, trees, etc.) or herbaceous (grasses). The classes include the following ranges (0-5%, 6-20%, 21-40%, 41-60%, 61-80%, 91-94%, 95-100%). Surveyors reference the description of the ranges described in the USDA protocol and the form below to select the most appropriate class. The average of all points along the transect is calculated to give the average forage utilization.

Uncertainties

Since this monitoring is qualitative, estimations may vary between surveyors. This potential variation is reduced by having estimates grouped into ranges rather than an exact percent. 2025 will be the first year of implementing this monitoring program in Onyx SVRA. Depending on the results of the surveys, the protocol might be adapted over time to better fit the Park's needs

Page ____ of ____

Landscape Appearance

Study Number	Date	Examiner

Allotment Name & Number	Pasture

Kind and/or Class of Animal	Period of Use

Class Interval	Int Mid (M)	Dot Count	No. By Class (C)	No. X Midmt. (C)(M)
0-5%	2.5			
6-20%	13			
21-40%	30			
41-60%	50			
61-80%	70			
81-94%	88			
95-100%	97.5			
		Totals		

Avg. Util. $= \frac{\Sigma(CM)^*}{\Sigma C} =$ _____

Notes (use other side or another page, if necessary)

* Where C = The number of observations within each class interval (C column), M = the class interval midpoint (M column), and Σ = the summation symbol.

(a) (0-5%). The rangeland shows no evidence of grazing or negligible use.

(b) (6-20%). The rangeland has the appearance of very light grazing. The herbaceous forage plants may be topped or slightly used. Current seedstalks and young plants are little disturbed.

(c) (21-40%). The rangeland may be topped, skimmed, or grazed in patches. The low value herbaceous plants are ungrazed and 60 to 80 percent of the number of current seedstalks of herbaceous plants remain intact. Most young plants are undamaged.

(d) (41-60%). The rangeland appears entirely covered as uniformly as natural features and facilities will allow. Fifteen to 25 percent of the number of current seedstalks of herbaceous species remain intact. No more than 10 percent of the number of low-value herbaceous forage plants are utilized. (Moderate use does not imply proper use.)

(e) (61-80%). The rangeland has the appearance of complete search. Herbaceous species are almost completely utilized, with less than 10 percent of the current seedstalks remaining. Shoots of rhizomatous grasses are missing. More than 10 percent of the number of low-value herbaceous forage plants have been utilized.

(f) (81-94). The rangeland has a mown appearance and there are indications of repeated coverage. There is no evidence of reproduction or current seedstalks of herbaceous species. Herbaceous forage species are completely utilized. The remaining stubble of preferred grasses is grazed to the soil surface.

(g) (95-100). The rangeland appears to have been completely utilized. More than 50 percent of the low-value herbaceous plants have been utilized.

Source: USDA 1996

Browse Utilization Classes

(a) (0-5%). Browse plants show no evidence of use; or only negligible use.

(b) (6-20%). Browse plants have the appearance of very light use. The available leaders of browse plants are little disturbed.

(c) (21-40%). There is obvious evidence of leader use. The available leaders appear cropped or browsed in patches and 60 to 80% of the available leader growth of browse plants remains intact.

(d) (41-60%). Browse plants appear rather uniformly utilized and 40 to 60% of the available leader growth of browse plants remains intact.

(e) (61-80%). The use of the browse gives the appearance of complete search. The preferred browse plants are hedged and some plant clumps may be slightly broken. Nearly all available leaders are used and few terminal buds remain on browse plants. Between 20 and 40% of the available leader growth of browse plants remains intact.

(f) (81-94%). There are indications of repeated coverage. There is no evidence of terminal buds and usually less than 20% of available leader growth on browse plants remains intact. Some patches of second and third years' growth may be grazed. Hedging is readily apparent and the browse plants are more frequently broken. Repeated use at this level will produce a definitely hedged or armored growth form.

(g) (95-100). Less than 5% of the available leader growth on browse plants remains intact. Some, and often much, of the more accessible second and third years' growth of the browse plants has been utilized. All browse plants have major portions broken.

Source: USDA 1996

Desert Tortoise Monitoring

OHMVR Division contracted with USGS Western Ecological Research Center to develop extensively detailed survey methodology for the desert tortoise surveys in the Park. The text below summarizes the monitoring protocols and is taken directly from the contract's Final Scope of Work (CDPR 2024). For brevity, only the section of the Scope of Work that details the monitoring protocol is included below.

"3.0 Specifications for Tasks and Detailed Performance Criteria

3.1 Permits. The lead person in the field supervising and conducting the work shall hold a valid California Department of Fish and Wildlife Memorandum of Understanding and shall be the holder of the permit or named on a current federal permit for the desert tortoise held by the lead field person coordinating with the Contract Manager. The federal permit must specify the State's Onyx Ranch SVRA properties. This is an essential legal requirement for this work. Any field person handling desert tortoises (touching or holding the tortoise, conducting health and trauma evaluations) must be named on both these permits unless conducting non-desert tortoise work. Individuals proposed for handling tortoises shall be named on the permits or names must be available to be placed on the permits prior to the initiation of work, with a 6-weeks lead time for the U.S. Fish and Wildlife Service. All individuals must be approved by the Contract Manager.

3.2 Location. Surveys shall be conducted on a minimum of 250 and no more than 300 designated hectare plots associated with the Onyx Ranch SVRA properties, primarily on state-owned lands. The locations were randomly selected and shall be provided by the Contract Manager. More hectare plots shall be sampled at lower elevations and adjacent to the Red Rock Canyon State Park, in habitats where tortoises are likely to be found. The Contractor shall locate each hectare plot and survey it twice, once in a north- south direction, and once in an east-west direction. The purpose of the surveys is to record specific data on resources and human uses, such as: desert tortoises, their sign (shell-skeletal remains, scats, tracks, burrows, dens and caves); vegetation; avian predators; predator sign concentrations; observations of mammalian predators of tortoises; and anthropogenic evidence of past and current uses. Incidental observations of other State and Federal threatened and Endangered species shall be recorded with their locations.

3.3 The Contractor shall be provided with data sheets to be filled out and used during the study: journal notes, live desert tortoise data sheet, multi-paged health profile data sheet, shell-skeletal remains data sheet, a detailed vegetation data sheet with 30 to 50 potential species to rank by abundance, a topography data sheet for avian predators, a

data sheet for mammalian and avian predators and sign concentrations, and one or more data sheets for human-related impacts. A Joshua tree data sheet is also required to be filled out, if Joshua trees occur on one or more hectares. The handwriting on these data sheets must be clear and easily readable. All data sheets shall be filled out in permanent black ink using pens with fine points, leaving no blank spaces. Pens with medium or wide points are not acceptable. Notations shall be in meters, centimeters, and millimeters of sizes of tortoises, roads, trails, etc.

3.4 Timing. It is highly desirable to survey hectare plots in the eastern part of the Onyx Ranch SVRA study area, the part with desert tortoise habitat, in spring; adults may be found also in September, but spring is best for all sizes. Timing of this sensitive area must measurably contribute to finding the tortoises.

3.5 More specifications on collecting and recording data during fieldwork for each hectare plot.

3.5.1 The Contractor shall fill out journal and field notes on several forms and for each hectare plot. If nothing is observed, e.g., no avian predators, then the notation should be made that no avian predators were observed on that hectare (on that day).

3.5.1.1 Journal Notes. The Contractor shall keep a journal sheet of all activities for each field day, including but not limited to: start and end times in Pacific Standard Time; work assignment for each part of the day by time period; identification numbers of each hectare plot surveyed or partially surveyed, numbers of tortoises found, and/or handled; shell-skeletal remains of tortoises encountered and collected and numbers of burrows and other tortoise sign; any observations of people, vehicles, predators, condition of annual vegetation including the invasive Brassica tournefortii (succulent or dry); and other important data. Weather conditions for each day shall be noted.

3.5.1.2 Live Tortoise Health Form. If a live tortoise is encountered on a hectare plot, the health form shall be filled out in full, photographs taken of the plastron, carapace, beak and nares, right and left eyes, anterior pads of both front forelegs, and foot pads of each hind leg. If lesions are present from trauma or disease, these shall be photographed. Macro-lenses shall be used where appropriate, and the subject matter shall fill the frame. Use of iPhone or similar to take digital images is unacceptable. The tortoise number shall be labelled by hectare number, e.g., 242-1, 242-2.

3.5.1.3 Form for recording signs of tortoises: burrows, rock shelters, caves or dens; scats, tracks, courtship rings or areas where combat occurred. This form will reference the hectare identification number, UTMs, and other details.

3.5.1.4 Form for recording shell-skeletal remains. This form requires expertise in identifying tortoise remains and knowledge of all tortoise scutes and bones. The remains shall be numbered by each hectare, e.g., 242-1, 242-2.

3.5.1.5 Vegetation Form. This form contains a list of 30 to 50 species known to occur in the survey area and slots for ranking those species by abundance on each hectare. This form shall be filled out for each hectare and requires knowledge and ability to identify (to genus and species) shrubs, trees, native bunch grasses, and common to occasional non-native forbs and annual grasses.

3.5.1.6. Topography Form. This form contains spaces for describing the type of topography found on the hectare plot.

3.5.1.7 Avian Predator Form. This form has places for identification of hectare plot (by number), time of day (PST) species of predator observed, activities of predator observed (flying, perched, on the ground, etc.).

3.5.1.8 Mammalian Predator and Sign Concentration Form. For each hectare, data on live predator observations (by species), scats (count by species), prey items, location of dens, den complexes, burrows, etc., are recorded.

3.5.1.9 Evidence of Anthropogenic Uses. This form contains places to record hectare number, presence and sizes of roads, routes, trails, single tracks, cattle and sheep presence and scats, cattle trails, camping areas, livestock watering areas, fires and burns, and many other such topics.

3.5.1.10 Form for Joshua trees. This form focuses on age classes (size and branching) of live and dead Joshua trees, condition of tree trunk and limbs, flowering, and other aspects related to condition and health found on hectares and shall be numbered by hectare number"

13 Appendix 4: Early Detection and Rapid Response (EDRR) Program

Eastern Kern County Onyx Ranch SVRA Early Detection and Rapid Response (EDRR)

Introduction

Onyx SVRA's proximity to HWY 14 and network of OHV trails and campsites makes it prone to infestation of invasive plants. The Department Operations Manual (DOM) calls for the management of invasive species and removal of new invasive plants (DOM 0310.7 and DOM 0310.7.2). In December 2022, staff in the Great Basin District were trained on EDRR by the Natural Resource Division (NRD), following the *California State Parks Early Detection and Rapid Response Handbook for Invasive Species Management* (CSP 2020). The EDRR program outlined in this document for Onyx SVRA was drafted in response to this training. A pilot period for the EDRR program at Onyx SVRA is planned for 2023-2024. This is a living document and will be updated as needed to evolve over time and maintain adaptive management.

Objectives

The objectives for the EDRR program for Onyx SVRA include the following:

- Prevent invasive species spread and propagation.
- Survey and document high priority areas annually for the Park's EDRR species.
- Respond to new invasive plant establishment.
- Annually transfer collected data to NRD.

Prevention

Staff will work to prevent the spread and propagation by implementing the following measures included in the EDRR Handbook (CSP 2020):

- "Work from clean sites to weedy sites each day"
- "Start clean and end clean, particularly as relates to tools"
- "Carry and use brushes for equipment, boots, and clothing. Brush before you use a site."

Survey

Survey Geography

Due to the limited staff availability at Onyx SVRA, surveys will be focused on high-use trails and roadways, trails leading to sensitive habitats, and areas of previous invasive plant treatment. The survey routes may be adapted over time or after the pilot years to better inform park management. Park routes to be surveyed include SC262, SC123 near Butterbredt Spring, Jawbone Canyon Road in Jawbone Open Area, SC176 south of SC171, and Kelso Valley Road. Dependent on staff availability, these routes may not all be surveyed annually and may be on a rotating schedule. These survey areas were selected for the pilot years for the following reasons:

- SC 262: This route had tamarisk removed in 2022. Surveys are needed to check for new sprouts.
- SC 123: This route leads to Butterbredt Spring, an Audobon Important Bird Area and desert riparian habitat.
- Jawbone Canyon Road: This route is the main access road to the Park and is heavily used by park visitors as well as commercial vehicles passing through to the adjacent wind farm.
- SC 176 south of SC 171: This route is heavily used by park visitors and campers, and leads to Alphie Spring, an important desert riparian habitat.
- Kelso Valley Road: This road is mainly used by ranchers and residents in the area. It is adjacent to sensitive habitats such as Joshua tree woodlands and wet meadows.

Field Methods

Surveyor Selection

Surveys will be done by Onyx SVRA's Environmental Scientists as well as staff on the natural resource trail crew. Prior to annual surveys, the trail crew staff will be trained by the Park's Environmental Scientists on identification of the target species and survey protocols. Plant identification cards for Onyx SVRA can be found in Appendix A.

Timing

Surveys should be done when the target species are flowering and/or are most detectable. However, given the extent of the target list and range of bloom periods, it is not possible to survey when all species are most detectable. Surveys will be concentrated in May through July, with additional surveys and observations done throughout the year incidental to other work in the Park.

Data Collection

Survey data collection is done using the “Great Basin District EDRR” survey in Survey123. This survey includes fields to collect data on the Park name, plant name, plant picture, landscape picture, location, location description, number of individuals, percent cover, reproductive stage, distribution, radius of infestation, treatment, treatment comment, and recorder.

The survey route will be documented using GPS Logger or Avenza. Documenting the survey route is important to track which areas have been surveyed and to report absence data if no EDRR species are found.

Target Species List

The target species list was developed during the EDRR training in December 2022. Species were selected based on CalWeedMapper. This list will be updated over time in response to EDRR survey results.

SPECIES	COMMON NAME	FAMILY	OPPORTUNITY	CAL-IPC RATING	CDFA RATING	Bloom
Cynara cardunculus	artichoke thistle	Asteraceae	surveillance	Moderate	B	Apr-Jul
Brassica rapa	birdsrape mustard, field mustard	Brassicaceae	surveillance	Limited	None	Jan-June
Brassica tournefortii	Saharan mustard, African mustard	Brassicaceae	surveillance	High	C	Dec-June
Bassia hyssopifolia	fivehook bassia	Chenopodiaceae	surveillance	Limited	None	June-July
Halogeton glomeratus	halogeton	Chenopodiaceae	surveillance	Moderate	A	July-Aug
Kochia scoparia	kochia	Chenopodiaceae	surveillance	Limited	None	Aug-Nov

SPECIES	COMMON NAME	FAMILY	OPPORTUNITY	CAL-IPC RATING	CDFA RATING	Bloom
Salsola paulsenii	Barbwire Russian Thistle	Chenopodiaceae	surveillance	Limited	C	Jul-Oct
Salsola tragus	Russian thistle	Chenopodiaceae	managed	Limited	C	July-Oct
Elaeagnus angustifolia	Russian-olive	Elaeagnaceae	surveillance	Moderate	None	June-July
Linaria dalmatica	dalmation toadflax	Plantaginaceae	Regional EDRR	Moderate	W	April-Sep
Bromus japonicus	Japanese brome, Japanese chess	Poaceae	surveillance	Limited	None	May-July
Bromus tectorum	cheatgrass	Poaceae	containment	High	C	May-June
Pennisetum setaceum	crimson fountaingrass	Poaceae	surveillance	Moderate	C	July-Aug
Stipa capensis	Mediterranean steppegrass	Poaceae	surveillance	Moderate	None	Mar-Apr
Stipa tenuissima	Mexican feathergrass	Poaceae	surveillance	Watch	C	June-Aug

SPECIES	COMMON NAME	FAMILY	OPPORTUNITY	CAL-IPC RATING	CDFA RATING	Bloom
Tamarix parviflora	smallflower tamarisk	Tamaricaceae	containment	High	B	Apr-May
Tamarix ramosissima	saltcedar, tamarisk	Tamaricaceae	containment	High	B	Apr-Aug
Peganum harmala	African-rue	Zygophyllaceae	surveillance	Watch	A	April-Nov
Zygophyllum fabago	Syrian beancaper	Zygophyllaceae	surveillance	Watch	A	July-Sep

Response

When an EDRR target species is identified, the course of treatment will be noted in the survey on Survey123. Treatments at Onyx SVRA are limited due to the organic cattle lease for the Park.

Treatment Strategy

When possible, treatments will be incorporated during surveys. Each vehicle performing surveys is equipped with an EDRR kit that includes a handsaw, hori hori, hand pruner, boot brush, and plastic bags. When an EDRR species is encountered, it will be treated at the time of the survey if it fits the criteria outlined in EDRR handbook (CSP 2020), meaning it:

- Is a patch <100m^2,
- Is at least 20 meters from another patch of the same species,
- Treatment can be done in 10 minutes,
- And the amount of weeds to carry away is manageable.

Treatment involves the removal of the plant and roots. If the plant has flowers or seeds present, or is a grass or aster, the plants will be bagged for removal.

For patches not meeting the criteria outlined above, treatment strategies will be developed and employed after the survey is completed.

Data Management and Annual Reporting

Data collected in Survey123 and the survey routes will be submitted to NRD annually by December 31st. The information is added into an annual report to track the results of the EDRR program and to help justify additional funding. Additionally, per the EDRR Handbook, annual reports submitted to NRD will include the following information (CDPR 2020):

- Highlights, changes, or recommendations.
- Changes to target species list.
- Application used to collect data (Survey123).
- Number of staff and hours spent conducting EDRR/

References

CSP. California State Parks. 2020. Early Detection and Rapid Response (EDRR) Handbook for Invasive Species Management.

Appendices

Appendix A. Plant Identification Cards

Weed Alert: Five-hook bassia (*Bassia hyssopifolia*)

Mature Size: Up to a meter tall

Description:

- Non-native
- Produces copious amounts of seed, but small populations can be controlled by mechanically removing plants before seed set
- Annual herb with simple or branching stems
- Leaf blades are flat and linear to lance-shaped

Bloom Period: June-July

Habitat: Wetland areas, alkaline habitats and disturbed places such as roadsides and fields

Removal: Digging, hand pulling, mowing, tillage, chemical

Please report locations of Five-hook *bassia* within California State Parks to patricia.farmer@parks.ca.gov

Photo credit: Joseph DiTomaso (year not dated)

Photo credit: Neal Kramer (2019)

Photo credit: Neal Kramer (2019)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

1

Weed Alert: Birdsrape mustard, field mustard (*Brassica rapa*)

Mature Size: Up to 3 ft. or more

Description:

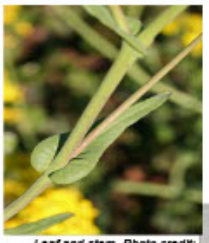
- Winter annual herb
- Non-native
- Resistant to frost and mild freezes and is an aggressive plant that grows profusely and may produce allelopathic chemicals that inhibit germination of native plants
- Buried seeds can survive 50 years or more
- Single crown growth form

Bloom Period: January-June

Habitat: Grows in disturbed areas (roadsides, cultivated fields, orchards)

Removal: Mowing, tillage, handpulling, chemical

Please report locations of birdsrape/field mustard within California State Parks to patricia.farmer@parks.ca.gov.



Leaf and stem. Photo credit: Neal Kramer (2008)

Photo credit: Toni Corelli (2019)

Description. Photo credit: Barbara Boehling (2017)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

2

Weed Alert: Saharan mustard, African mustard (*Brassica tournefortii*)

Mature Size: Up to 3 ft. tall

Description:

- Saharan mustard readily invades newly burned areas, and is known to increase fire frequency and fuel load
- Non-native
- Stiff white hairs perpendicular to stem at base and on leaves
- Seedpods up to 2 ¾ in. long, narrowed between seeds, with narrower smooth pointed section at top of seedpod
- Small, inconspicuous flowers are dull yellow with four petals

Bloom Period: December-June

Habitat: Deserts, coastal srcubs, desert dunes

Removal: Hand pullig, chemical

Please report locations of Saharan/African mustard within California State Parks to patricia.farmer@parks.ca.gov

Stem. Photo credit: Ron Vanderhoff (2021)

Photo credit: Joseph DiTomaso

Leaf & stem. Photo credit: Ron Vanderhoff (2021)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

3

Weed Alert: Russian olive (*Elaeagnus angustifolia*)

Mature Size: Up to 25 ft. tall

Description:

- Non-native
- Regenerate under a wide variety of floodplain conditions
- Grows as a tree or shrub and is found in disturbed, seasonally moist places below 5,000 ft. elevation
- Silvery foliage with its twigs and branches thorny
- Leaves alternate, narrowly lanceolate mostly 2 – 4 in.

Bloom Period: June-July

Habitat: Riparian, floodplains, grasslands, roadsides, dithces

Removal: Pulling, digging, cutting, chemical

Please report locations of Russian olive within California State Parks to patricia.farmer@parks.ca.gov.

15-20 ft. tall. Photo credit: Joe Woods (2015)

Description. Photo credit: Joseph

Olives. Photo credit: Louis Landry (2006)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

4

Weed Alert: Halogeton (*Halogeton glomeratus*)

Mature Size: Up to 1.5 ft.

Description:

- Non-native
- Can quickly invade disturbed or overgrazed sites and prevent reestablishment of desirable species because of salt accumulation on soil surface
- Produce one-seeded fruits with sepals forming a fan-shaped structure
- Stems are tinged reddish or purple and the leaves are alternate, sessile, dull green to bluish-green with a stiff bristle tip

Bloom Period: July-August

Habitat: Disturbed open stites, dry lakebeds, shrublands, roadisides, chemical

Removal: Tillage, pulling, chemical

Please report locations of Halogeton within California State Parks to patricia.farmer@parks.ca.gov.

Stem & leaves. Photo credit: Neal Kramer (2010)

Photo credit: Joseph DiTomaso

Stem & leaves.. Photo credit: Joe Woods (2019)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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5

Weed Alert: Dalmatian toadflax (*Linaria dalmatica*)

Mature Size: Up to 3 ft. or more

Description:

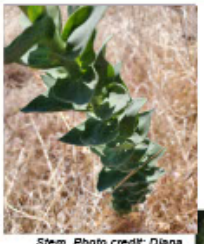
- Non-native
- Infestations often form large colonies displacing desirable vegetation
- Stems are rough and woody at the base becoming smooth, waxy, and herbaceous toward the top
- Leaves are waxy with bluish-green, ovate to heart-shaped but sometimes lanceolate with smooth margins
- Flowers resemble snapdragons, two-lipped, yellow, bearded throat and long spur

Bloom Period: April-September

Habitat: Open fields, pastures, riparian, rangeland, forest clearings, roadsides

Removal: Handpulling, mowing, tilling, chemical

Please report locations of Dalmatian toadflax within California State Parks to patricia.farmer@parks.ca.gov.



Stem. Photo credit: Diana Wing (2021)

Flower & . Photo credit: Patrick Hoffman (2022)

Flower & stem. Photo credit: Diana Wing (2021)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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6

Weed Alert: African-rue (*Peganum harmala*)

Mature Size: Up to 2 – 3 ft.

Description:

- Non-native
- Spreads via seeds and roots
- Numerous erect to spreading stems grow from crown of the root-stock into corymbose fashion
- Leaves are alternate, sessile, and have bristly long stipules at the base
- Flowers are white or yellow with greenish veins visible in the petals

Bloom Period: April – November

Habitat: Saline soils in temprate desert

Removal: Grabbing, digging, pulling, chemical

Please report locations of African Rue within California State Parks to patricia.farmer@parks.ca.gov.

Leaves. Photo credit: Luigi Rignanese (2006)

Description. Photo credit: UC Davis

Flower. Photo credit: Debra L. Cook (2011)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

7

Weed Alert: Crimson fountain grass (*Pennisetum setaceum*)

Mature Size: Up to 4 ft. tall

Description:

- Non-native
- Adapt to fire and can recover to pre-burn density, can increase density following a burn
- Leaves are narrow 8 – 13 in. long, folded or flat, sparsely short-hairy, with pronounced midvein on the underside
- Bristly pinnacles are 4 – 12 in. long that are purplish, numerous, unequal, straight

Bloom Period: July - August

Habitat: Disturbed sites, roadsides, urban places, coastal dunes, desert shrubland and canyons

Removal: Hand removal, pulling, chemical

Please report locations of Crimson fountain grass within California State Parks to patricia.farmer@parks.ca.gov.

Pinnacles. Photo credit: Steve Matson (2021)

Photo credit: Joseph DiTomaso

Pinnacle. Photo credit: Steve Matson (2021)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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8

Weed Alert: Russian thistle (*Salsola tragus*)

Mature Size: Up to 3 ft. or more

Description:

- Non-native
- Blowing skeletons interfere with traffic and can lodge against structures creating fire hazards
- Rigid, upward-curving branches and reduced, stiff, prickly upper stem leaves
- Flowers are small and inconspicuous, without petals, mostly solitary in leaf axils
- Appears to be bluish-green

Bloom Period: July – October

Habitat: Disturbed sites, waste places, roadsides, fields, grows best on loose, sand soils in air and alkaline soils

Removal: Pulling, mowing, tillage, chemical

Please report locations of Russian thistle within California State Parks to patricia.farmer@parks.ca.gov.

Photo credit: Steven Thorsted (2016)

Flower. Photo credit: Bob Case

Stem & leaf. Photo credit: Ilike Russler (2021)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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9

Weed Alert: Mediterranean steppegrass (*Stipa capensis*)

Mature Size: Up to 1 ft.

Description:

- Stems
- Potential to become a fire hazard in desert ecosystems
- Sharp florets can injure animals
- Decrease wildflower abundance
- Leaf is sheath glabrous to densely hairy bladed
- Native country

Bloom Period: March – April

Habitat: Desert scrub, roadsides, disturbed roadsides

Removal: Tillage, grubbing, digging, chemical

Please report locations of Mediterranean steppegrass within California State Parks to patricia.farmer@parks.ca.gov.

Photo credit: Emily Chase (2016)

Photo credit: Luigi Rignanese (2007)

Photo credit: Luigi Rignanese (2007)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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10

Weed Alert: Mexican feathergrass (*Stipa tenuissima*)

Mature Size: Up to 2 ft. tall

Description:

- Non-native
- Spreads by seeds dispersed by livestock, humans, wind, and water
- Crowds out pasture and native grasses
- Has silvery-green thread-like leaves
- Reproduction and spread
- Native country

Bloom Period: June – August

Habitat: Grasslands, woodlands

Removal: Pull, chemical

Photo credit: Keir Morse (2016)

Photo credit: Ron Vanderhoff

Photo credit: James Bailey (2017)

Please report locations of Mexican feathergrass within California State Parks to patricia.farmer@parks.ca.gov.

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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11

Weed Alert: Syrian beancaper (*Zygophyllum fabago*)

Mature Size: Up to 3 ft. tall

Description:

- Non-native
- White to orange flowers and oval shaped leaves
- Spreads via seeds and root suckers
- Leaf obliquely ovate
- Flowers are small, compact bunches of five petals with prominent stamens
- Grows in masses of individual plants forming colonies

Bloom Period: July - September

Habitat: Grasslands, dunes

Removal: Grubbing, digging, pulling, chemical

Photo credit: CDFA (2001)

Leaf and flowe. Photo credit: CDFA (2001)

Leaf. Photo credit: CDFA (2001)

Please report locations of Syrian beancaper within California State Parks to patricia.farmer@parks.ca.gov.

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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12

Weed Alert: Tamarix (*Tamarix ramosissima*)

Mature Size: Up to 20 ft. tall or more

Description:

- Non-native
- Associated with dramatic changes in geomorphology, groundwater, soil chemistry, fire frequency, plant density
- Absorb ground/surface water reducing water availability to plants and drying up wetlands
- Deciduous and have awl-like twig leaves that strongly overlap each other and have acute tips
- Twig leaves are scale-like and appear like small segments along a stem
- Flowers are white, pale or dark, with 5 petals and stamens

Bloom Period: April - August

Habitat: River, lake and pond margins, washes, roadsited, flats, dunes, desert springs

Removal: Chopping, pulling, mowing, heavy equipment removal, chemical

Please report locations of Tamarix within California State Parks to patricia.farmer@parks.ca.gov.

Twig & leaves. Photo credit: Barbara Boehling (2017)

Photo credit: Joe Woods (2018)

Description. Photo credit: Ron Vanderhoff (2020)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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13

Weed Alert: Artichoke thistle (*Cynara cardunculus*)

Mature Size: Up to 8 ft. tall

Description:

- Non-native
- Reproduces by seed and sometimes by resprouting from root fragments
- Most of the plant's large taproot must be removed to avoid resprouting
- Grayish, spiny, deeply pinnate-lobed leaves and large purple flowerheads
- Plants send up one to several erect, thick , branched stems with spiny ribs

Bloom Period: April - July

Habitat: Disturbed open sites, grasslands, chapparal, coastal scrun, riparian areas

Removal: Cutting, cultivated, chemical

Please report locations of Artichoke thistle within California State Parks to patricia.farmer@parks.ca.gov.

Photo credit: Allison Rofe (2022)

Flower. Photo credit: Joseph DiTomaso

Stem & flower. Photo credit: Michael Charters (2003)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC Inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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14

Weed Alert: smallflower tamarix (*Tamarix parviflora*)

Mature Size: Up to 15 ft. tall

Description:

- Non-native
- Reduce groundwater water tables
- Deposit salt minerals
- Flowers are pale to dark pink with 4 sepals, petals, and stamens have nectar disc at the base

Bloom Period: April – May

Habitat: Groundwater availability, changes in geomorphology, soil chemistry, fire frequency, tiches, desert springs, dunes

Removal: Mowing, chopping, chaining, burning, chemical

Photo credit: Leslie Cobb (2020)

Photo credit: Leslie Cobb (2020)

Stem. Photo credit: Steve Matson (2016)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available: https://www.calflora.org/

Please report locations of smallflower tamarix within California State Parks to patricia.farmer@parks.ca.gov.

15

Weed Alert: barbwire Russian thistle (*Salsola paulsenii*)

Mature Size: Up to 20 in. tall

Description:

- Non-native
- Skeletons can lodge into fences and structures, creating fire hazards
- Rigid, upward-curving branches and reduced, stiff, prickly upper stem leaves
- Flowers are small and inconspicuous, without petals, mostly in leaf axils
- Sepals are wing-life, often n browning to pinkish to red

Bloom Period: July – October

Habitat: Disturbed open sites, waste places, roadsides, fields

Removal: Pull, mowing, tillage, chemical

Stem. Photo credit: Masson Hyland (2017)

Photo credit: Steve Matson (2016)

Photo credit:Michael Charters (2003)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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Please report locations of barbwire Russian thistle within California State Parks to patricia.farmer@parks.ca.gov.

16

Weed Alert: Kochia (*Kochia scoparia*)

Mature Size: Up to 1 ft. or more

Description:

- Non-native
- Establish and persist in harsh environments where plants are limited
- Alternately arranges leaves are linear to ovate to 2 in. long and can have hairs
- Stems are greed, red tinged, or red
- Flowers are green leaf-life bracts

Bloom Period: August – November

Habitat: Disturbed open sites, waste places, roadsides, fields

Removal: Pull, mowing, grazing, chemical

Steam and leaf. Photo credit Zoya Akulova: (2014)

Photo credit: Jean Pawek (2012)

Leaf. Photo credit: Zoya Akulova (2014)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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Please report locations of Kochia within California State Parks to patricia.farmer@parks.ca.gov.

17

Weed Alert: Japanese brome (*Bromus japonicus*)

Mature Size: Up to 3 ft. tall

Description:

- Non-native
- Grass out-competes native grasses where grazing and fire have been reduced
- Compete for limited spring moisture with desirable vegetation
- Reduce desirable vegetation cover and prevent establishment of native perennials and other forage crops
- Soft leaves, hair on both sides
- Spikelets covered with hair

Bloom Period: May – July

Habitat: Grasslanges, sagebrush communities, pinyon-juniper communities, disturbed sites

Removal: Pull, digging, tillage, chemical

Photo credit: Steve Matson (2006)

Closeup. Photo credit: Steve Matson (2006)

Dry. Photo credit: Mike Haddock (2021)

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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Please report locations of Japanese brome within California State Parks to patricia.farmer@parks.ca.gov.

18

Weed Alert: Cheatgrass (*Bromus tectorum*)

Mature Size: Up to 3 ft. tall

Description:

- Non-native
- Overcrowds native grasslands and croplands
- Fire promoters
- Leaf sheaths are typically short with soft hairs
- Florets have long awns

Bloom Period: May – June

Habitat: Disturbed open sites, rangelands, agronmic crops, foresty sites

Removal: Tillage, chemical

Dry. Photo credit: Ron Vanderhoff (2022)

Photo credit: Jason Willand (2007)

Dry. Photo credit: Ron Vanderhoff (2022)

Please report locations of Cheatgrass within California State Parks to patricia.farmer@parks.ca.gov.

References:

- California Invasive Plant Council (Cal-IPC). 2020. The Cal-IPC inventory. California Invasive Plant Council. Berkeley, California. https://www.cal-ipc.org.
- Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/
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19

14 Appendix 5: PRC Related to the WHPP

PRC §5090 provides language on conserving and improving natural resources within SVRAs, which further informs the scope and purpose of WHPPs:

§5090.10 "'Conservation' and 'conserve' mean activities, practices, and programs that protect and sustain soils, plants, wildlife, habitats, and cultural resources in accordance with the standards adopted pursuant to Section 5090.35.

§5090.11 "'Restoration' and 'restore' mean, upon closure of the unit or any portion thereof, the restoration of land to the contours, the plant communities, and the plant covers comparable to those on surrounding lands or at least those that existed prior to off-highway motor vehicle use.

§5090.13 "'Monitoring program' means a program adopted by the department that provides periodic evaluations of the condition of resources and informs adaptive management within state vehicular recreation areas."

§5090.14 "'Adaptive management' means to use the results of information gathered through a monitoring program or scientific research to adjust management strategies and practices to conserve cultural resources and provide for the conservation and improvement of natural resources."

§5090.32. (g) the Off-Highway Motor Vehicle Recreation Division (Division) to "Prepare and implement management and wildlife habitat protection plans for lands in, or proposed to be included in, state vehicular recreation areas, including new state vehicular recreation areas. These plans shall be developed in consideration of statutorily required state and regional conservation objectives. However, a plan shall not be prepared in any instance specified in subdivision (c) of Section 5002.2. Trails may only be added or included as components of existing trail systems when developing or updating plans in state vehicular recreation areas, upon completion of full environmental review."

§5090.35. (a) "The protection of public safety, the appropriate utilization of lands, and the conservation of natural and cultural resources are of the highest priority in the management of the state vehicular recreation areas. Additionally, the division shall promptly repair and continuously maintain areas and trails, and anticipate and prevent accelerated and unnatural erosion and other off-highway vehicle impacts to the extent possible. The division shall take steps necessary to prevent damage to significant natural and cultural resources within state vehicular recreation areas."

§5090.35. (c) (1) "The division shall compile and, when determined by the department to be necessary, periodically review and update an inventory of wildlife populations and prepare a

wildlife habitat protection plan that conserves and improves wildlife habitats for each state vehicular recreation area. By December 31, 2030, the division shall compile an inventory of native plant communities in each state vehicular recreation area to inform future plan updates."

§5090.35. (d) "The division shall monitor annually in each state vehicular recreation area to determine whether soil conservation standards are being met and the objectives of wildlife habitat protection plans are being met."

5090.35. (f) "The division shall protect natural, cultural, and archaeological resources within the state vehicular recreation areas."

§5090.39. (a) "The department shall require that: (1) Any soil conservation standard, wildlife habitat protection plan, or monitoring program, required by this chapter, applies best available science. (2) All standards, plans, and monitoring programs subject to paragraph (1) shall provide opportunities for public comment, including, but not limited to, written comments and public meetings, as appropriate."

§5090.43. (a) "State vehicular recreation areas consist of areas selected, developed, and operated to provide off-highway vehicle recreation opportunities. State vehicular recreation areas shall be selected for acquisition on lands where the need to establish areas to protect natural and cultural resources is minimized, the terrain is capable of withstanding motorized vehicle impacts, and where there are quality recreational opportunities for off-highway motor vehicles. Areas shall be developed, managed, and operated for the purpose of providing the fullest appropriate public use of the vehicular recreational opportunities present, in accordance with the requirements of this chapter, while providing for the conservation of cultural resources and the conservation and improvement of natural resource values over time."

§5090.43. (b) "After January 1, 1988, no new cultural or natural preserves or state wildernesses shall be established within state vehicular recreation areas. To protect natural and cultural resource values, sensitive areas may be established within state vehicular recreation areas where determined by the department to be necessary to protect natural and cultural resources. These sensitive areas shall be managed by the division in accordance with Sections 5019.71 and 5019.74, which define the purpose and management of natural and cultural preserves."

§5090.43. (c) "If off-highway motor vehicle use results in damage to any natural or cultural resources or damage within sensitive areas, appropriate measures shall be promptly taken to protect these lands from any further damage. These measures may include the erection of physical barriers and shall include the restoration of natural resources and the repair of damage to cultural resources."