



FINAL 2022 PRAIRIE CITY STATE VEHICULAR RECREATION AREA WILDLIFE HABITAT PROTECTION PLAN

Prairie City State Vehicular Recreation Area
September 22, 2022



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LIST OF ABBREVIATIONS

Abbreviation	Definition
ARU	Audio Recording Unit
ATV	All-Terrain Vehicle
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
DBH	Diameter at Breast Height
CDPR	California Department of Parks and Recreation
EDRR	Early Detection and Rapid Response
EIR	Environmental Impact Report
ETC	Environmental Training Center
GP	General Plan
GIS	Geographic Information System
GPS	Global Positioning System
HMS	Habitat Monitoring System
IBP	Institute for Bird Populations
IPaC	Information for Planning and Consultation
MU	Management Unit
NDVI	Normalized Difference Vegetation Index
NRCS	Natural Resources Conservation Service

NRD	Natural Resources Division
NVCS	National Vegetation Classification Standard
OHMVRD	Off-Highway Motor Vehicle Recreation Division
OHV	Off-Highway Vehicle
PCMX	Prairie City Motocross
PEF	Project Evaluation Form
PG&E	Pacific Gas and Electric
PRC	Public Resources Code
ROV	Recreational Off-Highway Vehicle
RTMP	Road and Trail Management Plan
SB	Senate Bill
SCP	Soil Conservation Plan
SMART	Specific, Measurable, Achievable, Realistic, Timely
SMUD	Sacramento Municipal Utility District
SSHCP	South Sacramento Habitat Conservation Plan
SVRA	State Vehicular Recreation Area
SWAP	State Wildlife Action Plan
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VegCAMP	Vegetation Classification and Mapping Program
VELB	Valley Elderberry Longhorn Beetle
WHPP	Wildlife Habitat Protection Plan
WMA	Weed Management Area

1 INTRODUCTION

1.1 PURPOSE AND SCOPE OF 2022 WILDLIFE HABITAT PROTECTION PLAN

The purpose of the 2022 Wildlife Habitat Project Plan (WHPP) is to define the goals and objectives that drive the adaptive management framework of Prairie City State Vehicular Recreation Area's (Prairie City SVRA/the Park) natural resources program (PRC section §5090.14.) The WHPP outlines the specific management actions and monitoring efforts that underpin the program while also providing the context from which the plan was developed. Addressing the spectrum of land management and visitor use activities that affect wildlife habitat at the park, it details existing conditions, provides an overview of collected resource data, explains how monitoring will influence management decisions, defines who is involved with decision making, and how information is communicated. As an evolving document based on the best available science with clear guidance for a five-year planning horizon and a roadmap for work well beyond that, WHPP development includes a transparent peer-review process and an opportunity for public comment.

1.2 LEGAL AND OPERATIONAL REQUIREMENTS

Since 1988, California Public Resources Code (PRC) has required a WHPP for each State Vehicular Recreation Area (SVRA) that focuses on sustaining a viable species composition. 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 PRC §5090 language relating to the WHPPs can be found in Appendix 5.

1.3 RELATIONSHIP WITH OTHER SVRA PLANS

The WHPP complements other management plans for the Prairie City SVRA, including the 2016 General Plan (2016 GP), Soil Conservation Plan (SCP), and Road and Trail Management Plan (RTMP). These management plans are interconnected, and topics in one plan may cross over into elements of another.

The GP establishes long-range vision, goals, and guidelines for the SVRA and serves as the basis for developing focused feasibility and management plans, project plans, and other management actions necessary to implement the goals of the GP (CDPR 2016a). The GP is the Park's primary management document, and any other planning or management documents, including the WHPP, developed for the park must remain consistent with it. Therefore, the GP was used as a guide and source for developing this WHPP and the information provided within.

The SCP, currently being developed, provides a comprehensive overview of soil management practices at the park to ensure compliance with the 2020 Soil Conservation Standard and Guidelines (Soil Standards) (CDPR 2021h). The plan also defines protocols for assessment, maintenance, and monitoring efforts implemented at the park and is intended to meet the requirements of SB 249. The SCP overlaps many topics in the WHPP as soils are a key abiotic factor and provide the foundation for many ecosystem functions. The SCP is planned to be completed by the fall of 2022.

The RTMP, currently being developed, describes the existing road and trail conditions in the park, provides direction for their future management and includes specific actions for individual roads and trails (CDPR 2017b). A comprehensive road and trails program ensures recreational trail opportunities are made available at full potential while conserving and enhancing cultural and natural resources. The RTMP provides a landscape and project-based approach to implement goals and management actions related to both the SCP and the WHPP while delivering engaging recreation opportunities for park users. The RTMP is still in development and does not have an anticipated completion date.

1.4 CEQA COMPLIANCE

The WHPP 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 California Environmental Quality Act (CEQA) process (not necessarily the product) begins at this stage. If discretionary projects or actions are identified, the California Department of Parks and Recreation (CDPR or Department) will follow the Department's procedure for meeting CEQA compliance. Once a project or action has been selected for implementation, it will undergo assessment using the CDPR Project Evaluation Form (PEF) to determine the necessary documentation for compliance with CEQA.

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 Gold Fields District Natural Resources Program Manager and the Prairie City SVRA Sector Manager and District Superintendent. Then, it is submitted to the Natural Resource Division (NRD) for peer review and 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. The initial 2022 WHPP will undergo public review and Best Available Science Determination through the NRD. If any significant alterations are made to this 2022 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 a common strategy and fundamental component of implementing the best available science in natural resource management. Adaptive management includes assessing existing conditions, developing objectives based on those conditions, identifying management actions, and monitoring these actions, which allows evaluation and adjustment of practices (Figure 1). Section 2 through 6 provides information on natural resource planning for each step of the adaptive management process.

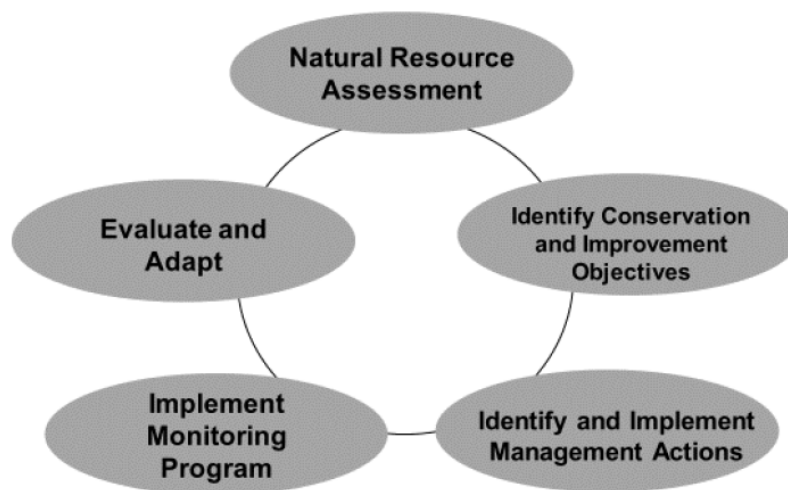


Figure 1. Steps of the Adaptive Management Process (CDPR 2021i)

2 SVRA SETTING AND NATURAL RESOURCE ASSESSMENTS

The following chapter provides information on the Prairie City SVRA setting and natural resource assessments. The setting and natural resource assessments are used to understand important conservation issues within the SVRA. 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

The Park is in eastern, unincorporated Sacramento County, approximately 20 miles east of downtown Sacramento, California (Figure 2). This area lies in the transition zone between the Central Valley and the Sierra foothills. The American River lies approximately four miles north, the Cosumnes River approximately seven miles to the south, and the Sacramento River approximately 20 miles to the west. The Park covers portions of Sections 25, 26, 30, and 31 on the USGS Buffalo Creek 7.5 quadrangle and is approximately 1350 acres.

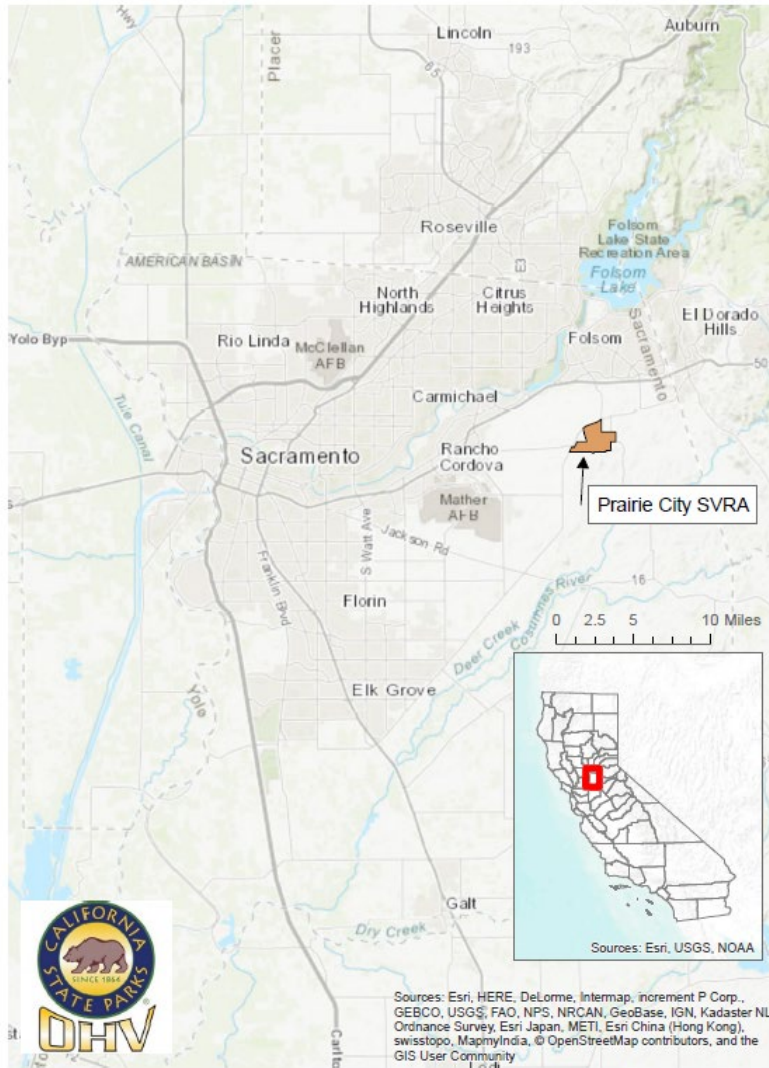


Figure 2. Location of the Park

2.1.2 History

The Park is situated at the intersection of the Nisenan (sometimes referred to as the Southern Maidu) and Plains Miwok prehistoric spheres of influence. A few bedrock milling features can be found within the park's boundaries, and additional milling features may be buried beneath the sediment (CDPR 2016a).

During the Gold Rush, miners started a boomtown a few miles north of the park bearing the name of Prairie City. The Park displays the remains of bucket-line dredging operations of the Capital Dredging Company, which operated from 1927 to 1952 in the western portion of the present-day SVRA (Figure 3).

In December 1950, Aerojet purchased 7,200 acres of land, including the area currently occupied by the Park. In 1962, Aerojet began developing the M-1 Rocket Engine Program for NASA. In February 1965, the project received a stop-work order due to funding limitations, and the program was halted. Most facilities related to the program were dismantled and removed. Area 39, a Superfund Site, contains former test stand burn areas and former waste production burn areas fenced off to prohibit access (Figure 3). Several contaminated groundwater plumes have been identified at the former Aerojet operations facility. As part of a remediation effort, there are numerous groundwater monitoring and extraction wells owned/operated by Aerojet to capture and treat the groundwater in the southeast corner of the SVRA.

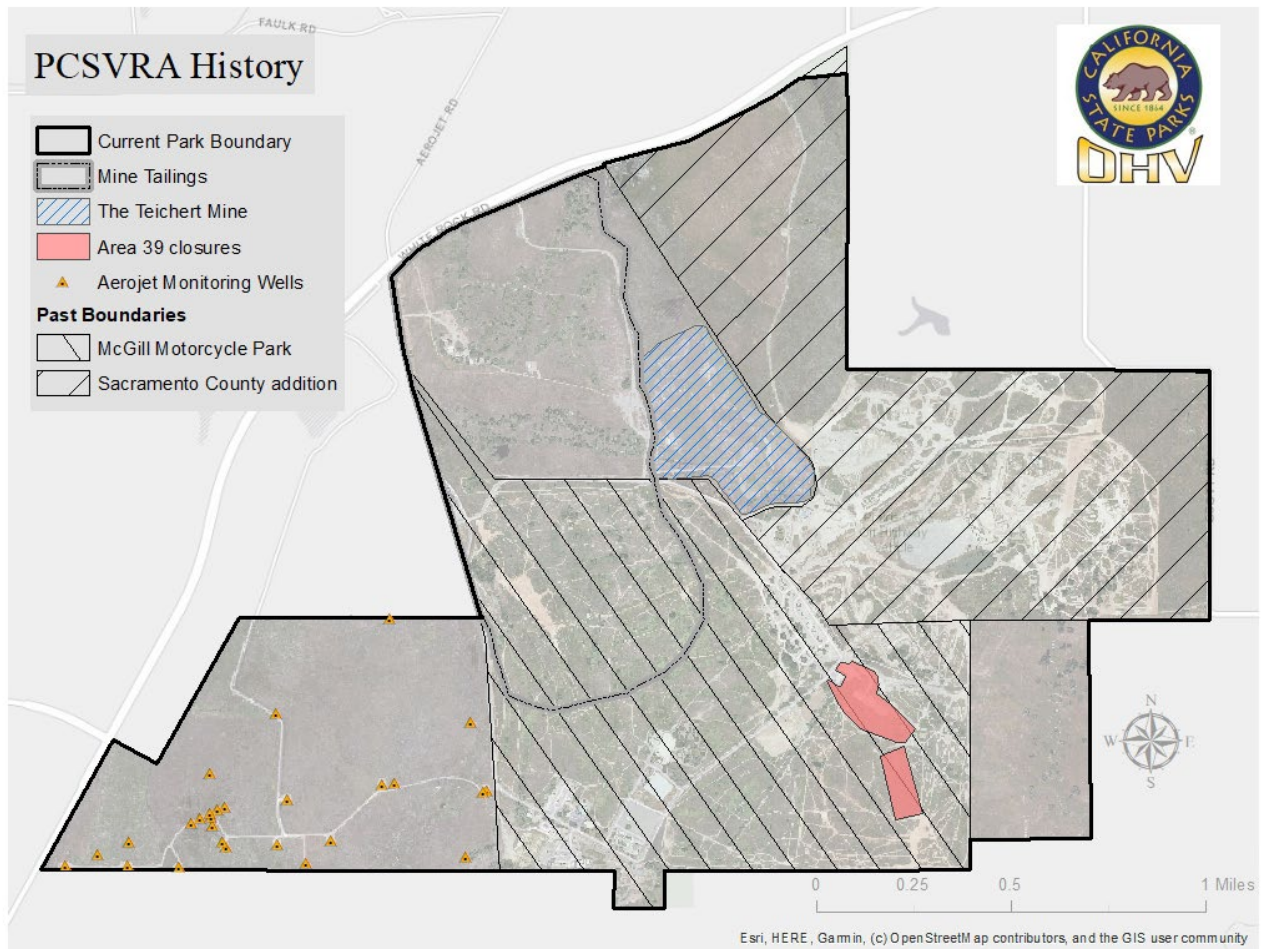


Figure 3. Physical Remnants of Historic Use within Prairie City SVRA

In 1972, Aerojet sold 435 acres of property to Roy and Mary McGill, who established a private cycle park. Sacramento County purchased the park in 1975, using funds from the OHMVRD Cooperative Grants and Agreements program, and purchased an additional 401 acres in 1976. In 1988, when OHMVRD took ownership of the park, it inherited existing facilities and a network of unplanned and dense user-created trails and tracks. Since that time, the OHMVRD has purchased a few of the surrounding properties along with associated existing and new

easements or leases such as the Teichert conveyor belt on Barton, the Teichert Gravel Mine, or “The Pit,” on Yost, and the Aerojet test and extraction wells on Ehnisz (Figure 3). The current size of the park is approximately 1350 acres.

2.1.3 General Environmental Characteristics

The northern and western portion of the park ranges from 280 to 300 feet above mean sea level. This area generally consists of gently rolling to nearly level topography. The topography in the eastern portion of the park is variable, with elevations ranging from 240 to 300 feet above mean sea level. The park also contains gold dredge mine tailings, consisting of low mounds (5–10 feet high) of cobbles, silt, and sand. In the northern section of the park, there is a reclaimed gravel quarry (“The Pit”) that is generally bowl-shaped. The top rim of The Pit is approximately 48 acres in area and the bottom approximately 26 acres in area and roughly 80-feet deep.

The Park is within the 12-digit Hydrologic Unit Code watersheds of Upper American River, Upper Morrison Creek, and Carson Creek (CDPR 2016a). The United States Geological Survey (USGS) developed the Hydrologic Unit Code to subdivide and classify increasingly smaller watersheds across the United States. It uses eight levels of watersheds identified by two to 16-digit codes based on the level: two-digits are the largest watershed and 16 the smallest (USGS 2021). Two ephemeral streams and one intermittent streamflow southeasterly through the park into Coyote Creek. An ephemeral stream runs northwesterly through the northeast corner of the SVRA and is a tributary to Buffalo Creek (CDPR 2020a). Local surface water features in the park include seasonal drainages (swales, human-made ditches, and ephemeral drainages), ponds, and vernal pools. The on-site drainage features appear to intercept groundwater in several locations. In general, rolling hills are bisected by drainage swales feeding north-south-oriented tributaries flowing into Coyote Creek (Figure 4).

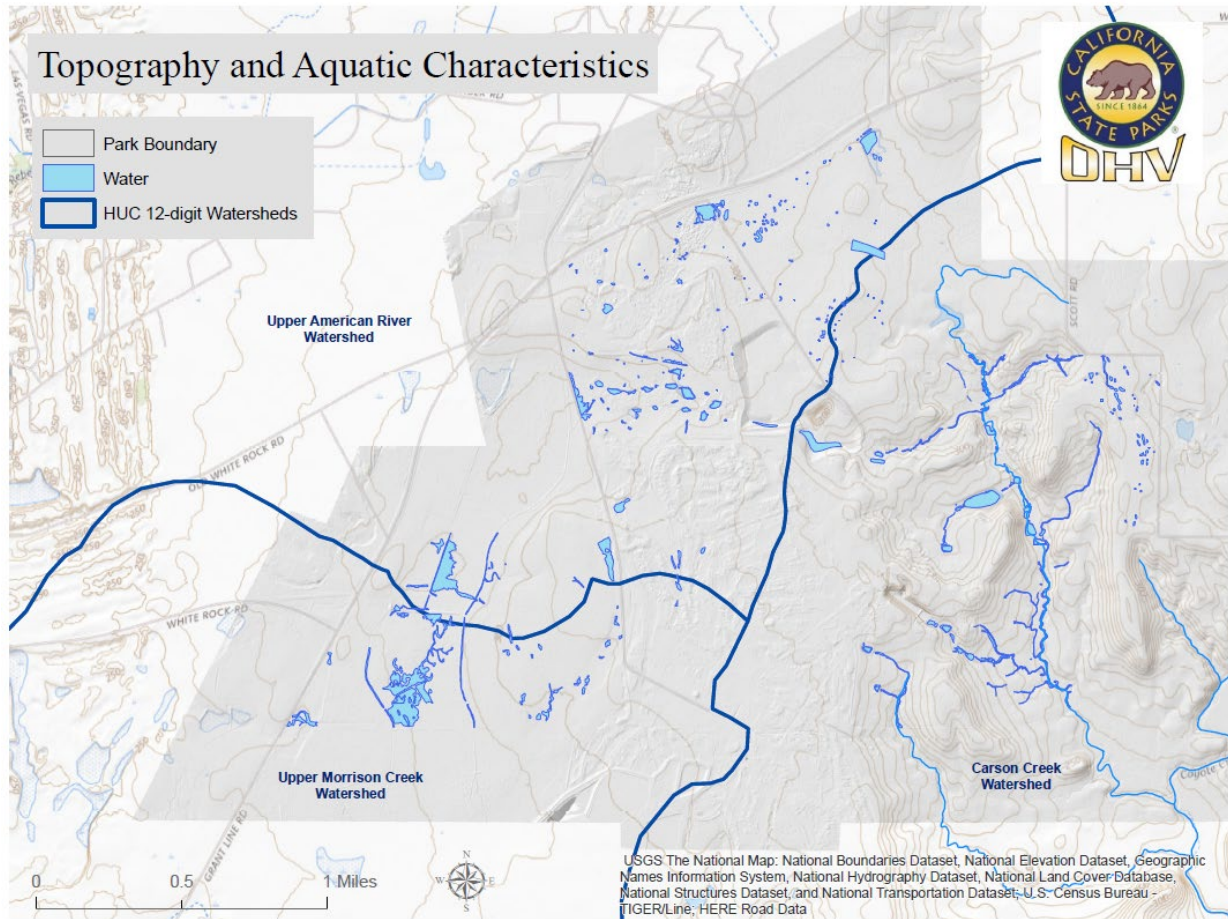


Figure 4. Topography and Aquatic Characteristics at The Park.

The region has a Mediterranean climate with dry, hot summers and mild winters. Precipitation occurs mostly from November through April, averaging around 25 inches per year. Typically, little or no precipitation falls during June, July, and August. The region’s intense heat and sunlight lead to high ozone concentrations from May to October. In the summer and early fall, a layer of warm air in the atmosphere, called a temperature inversion, traps in pollutants and can cause higher ozone concentrations (CDPR 2016a). Regional wind patterns affect air quality by moving pollutants downwind of sources.

2.1.4 Regional Land Use

The land use designations for properties adjacent to Prairie City SVRA are mostly General Agriculture, except the properties to the north designated as Extensive Industrial in the Aerojet Planning Area (CDPR 2016a). There are multiple land use designations within the East Planning Area, Grant Line West Planning area, and the Folsom Plan Area Specific Plan area (Figure 5). Aerojet owns the property to the west and north of the SVRA (approximately 8,000 acres) and uses the property for industrial operations and aerospace and defense product testing. Also

present is a ground-mounted, 6-megawatt solar electric system. The Teichert-owned property located east and south of the SVRA is used for mining, and the Barton Ranch property, also located to the east and south, is used primarily for cattle grazing. Portions of the General Agriculture land use designation to the northeast and southeast of Prairie City SVRA have a Resource Conservation Area combining designation that identifies areas with special resource management needs. Such needs may include vernal pool management, wetland creation, waterfowl management, peat soil conservation, and blue oak woodland harvesting (CDPR 2016a).

The Rancho Cordova East Planning Area, Rancho Cordova Grant Line West Planning Area, and the Folsom Plan Area all have residential and community commercial components and are expected to include roughly 24,000 dwellings of various densities between the three of them. Construction has already started within the [Folsom Plan Area](#) on the east side and is moving west towards the park. Folsom Plan Area updates can be found [here](#). The City of Rancho Cordova has also started construction within the Grant Line West Planning Area and has initiated an EIR for a new housing development, [called the Preserve](#), in the area. For more detailed information on these planning areas and nearby regional recreation facilities, see Section 2.1 of the 2016 GP.

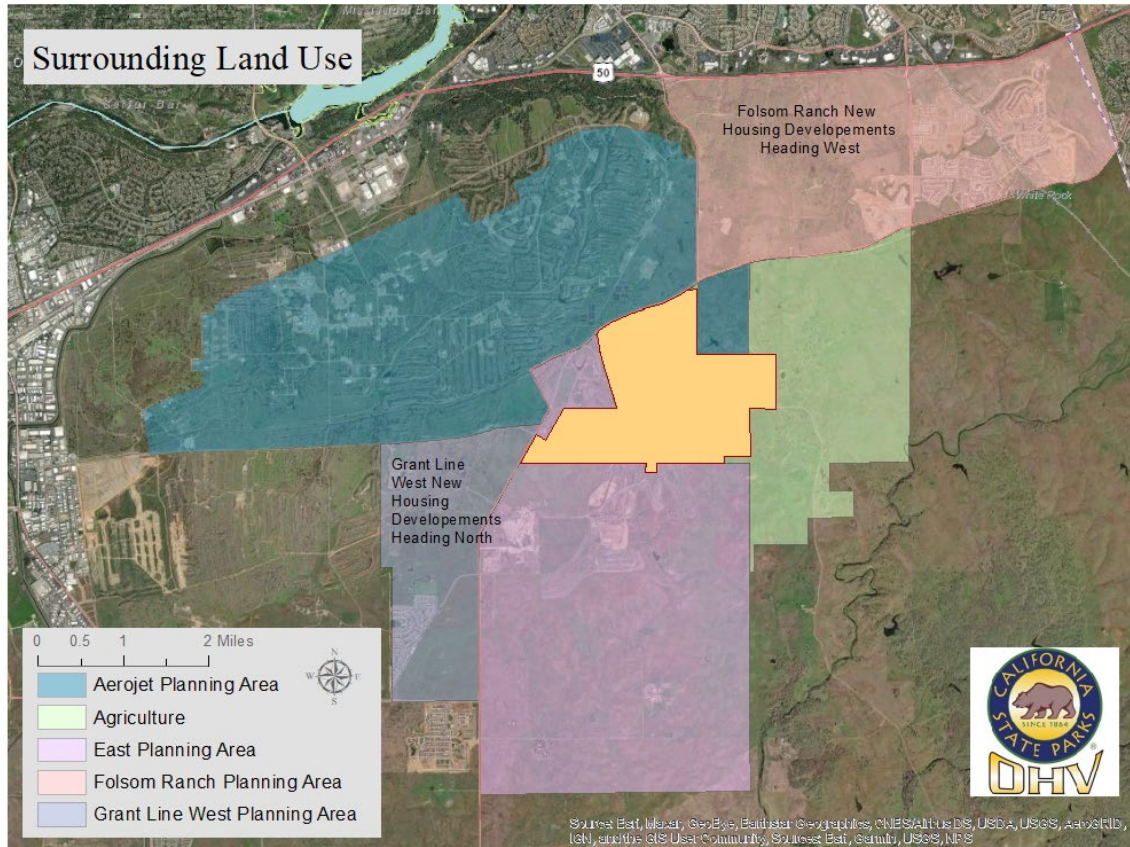


Figure 5. Regional Land Use

There are various easements across the Park. Several are for utility providers, such as Pacific Gas and Electric Company (PG&E) and Sacramento Municipal Utility District (SMUD), to allow transmission lines to run through the site and to maintain electric poles (Figure 6). Teichert owns a 100-ft exclusive easement for a conveyor belt located within Barton in the park's southeastern corner. In addition, a 150-ft haul road easement owned by Barton Moser LLC for mining operations is located along the southern boundary of the SVRA into the Ehnisz property, connecting to Grant Line Rd. On the southernmost Ehnisz property, there are numerous groundwater monitoring and extraction wells owned/operated by Aerojet to capture and treat contaminated groundwater generated from past disposal practices.

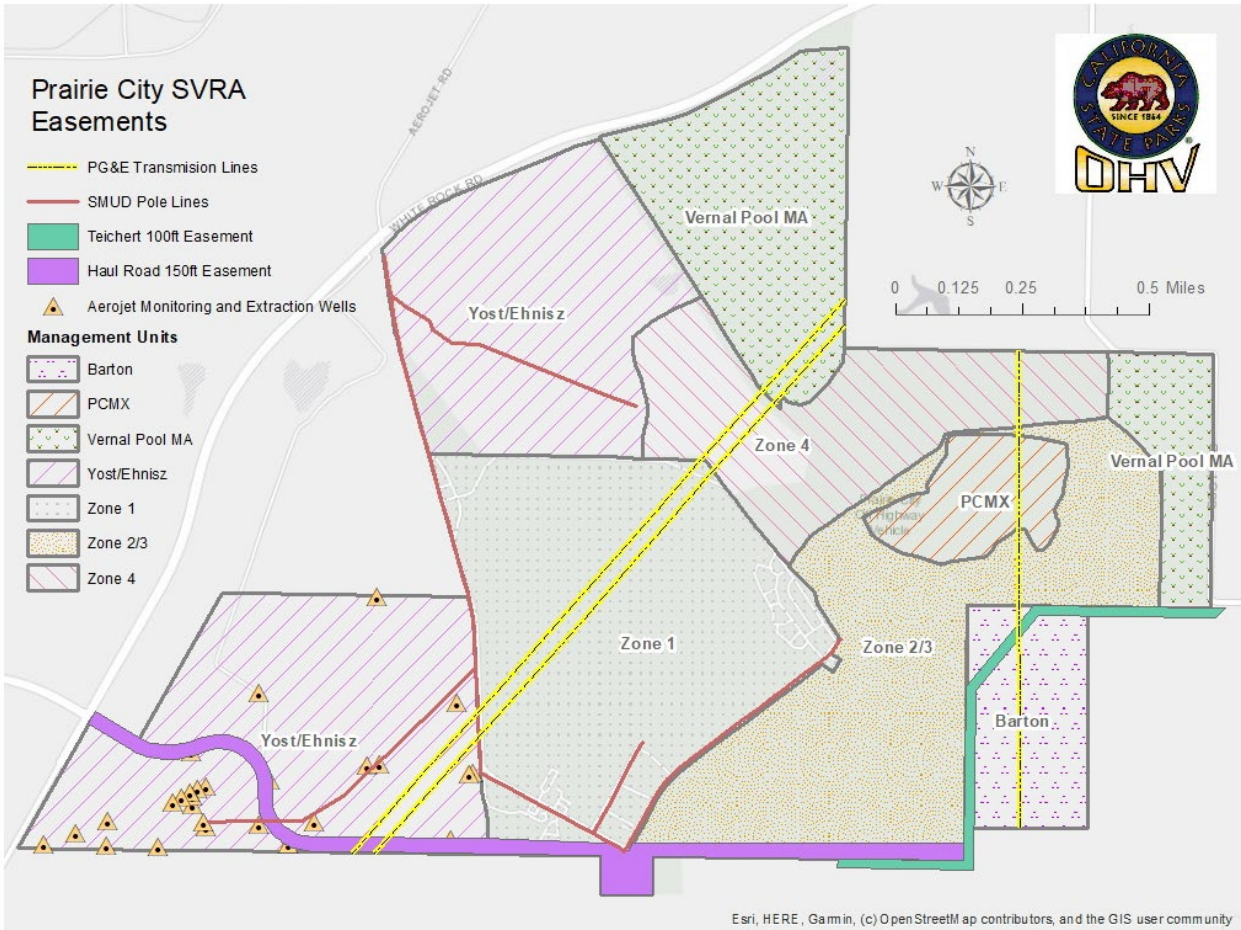


Figure 6. Easements within Prairie City SVRA

2.1.5 Park Land Use and Zoning

Prairie City SVRA has been used for off-highway vehicle (OHV) recreation since the early 1970s. Although the first recreationists were primarily motorcycle riders, today, the SVRA offers a variety of recreational opportunities that include trails and tracks for motorcycles, all-terrain vehicles (ATVs), four-wheel-drive vehicles (4x4s), recreational off-highway vehicles (ROVs), go-karts, and quarter midget vehicles. In the summer, mountain bikers use the SVRA when the park is closed on Wednesdays to OHV recreation for maintenance.

Prairie City SVRA typically operates during daylight hours—from 8 a.m. to sunset—and closes daily, sometime between 5 p.m. and 8 p.m., depending on the time of year. The busiest months at Prairie City SVRA occur from October through April. Typically, the annual Hangtown Motocross Classic is held in May, and the annual Visitor Appreciation Day is held in October. The Hangtown Motocross Classic is the largest special event held at the SVRA and has hosted up to 30,000 attendees in the past. The race is part of a national championship motocross series and is put on by the Dirt Diggers North Motorcycle Club and has been held at this location for over 40 years.

Existing facilities include the staff offices, maintenance facilities, ranger station, and visitor services kiosk, the environmental training center (ETC), various practice tracks, staging areas, obstacle course area, 30 miles of roads and designated trails, 40 miles of historic user-created trails, and 4x4 area special event route (Figure 7). See the Section 2.2.3 of the 2016 GP for more detail on these facilities. The GP explores relocating existing facilities to serve users and staff better, adding new facilities that improve SVRA operations, offering more recreation opportunities for a range of OHV enthusiasts with a broad range of riding skills, and providing new recreational opportunities for currently underserved areas potential visitors.

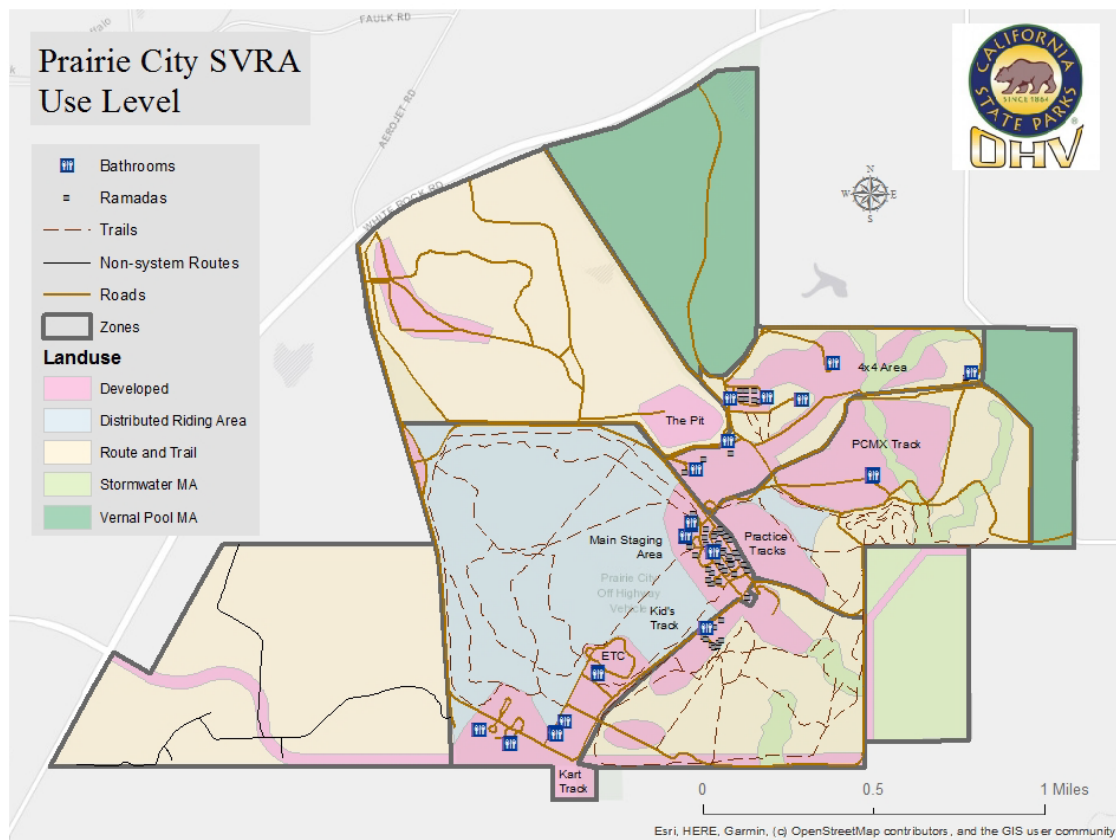


Figure 7. Land Use and Zoning within Prairie City SVRA.

The GP determines land use designation within the park and is divided into five land-use types: Developed Use Area, Distributed OHV Recreation Use Area, Route and Trail System Use Area, Stormwater Management Use Area, and Vernal Pool Management Use Area (Figure 7). The following provides a short description of each use type. For more information, see the GP Section 4.3 (CDPR 2016a).

- **Developed Use Area:** This area accommodates the more intense recreational and administrative uses and includes the existing and future built facilities.

- Distributed OHV Recreation Area: This area provides distributed OHV recreation not confined to designated routes and trails. Visitors will continue to enjoy distributed OHV recreation and connect with practice tracks and the route and trail system use area.
- Route and Trail System Use Area: This area allows OHV recreation on identified routes and trails of varying difficulty for skills development and technical riding. Additional routes and trails will be established on the Yost and Ehnisz properties.
- Stormwater Management Use Area: This area provides stormwater runoff treatment and water quality improvement.
- Vernal Pool Management Use Area: This area includes a high concentration of vernal pools, which often provide habitat for specially adapted plants and animals, including several species listed under the California and Federal Endangered Species Acts. This area will not be open to OHV recreation. However, it can provide access to nonmotorized recreation such as picnicking, wildlife viewing, and guided vernal pool interpretative hikes.

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 (CDPR 2021j).

MUs were established at Prairie City in 2020 to provide a structure for implementing and organizing maintenance and natural resource management activities. Delineation of Prairie City SVRA MUs was based on vegetation community differences, OHV use type, and the similar regime of routine maintenance and management needs (Figure 8).

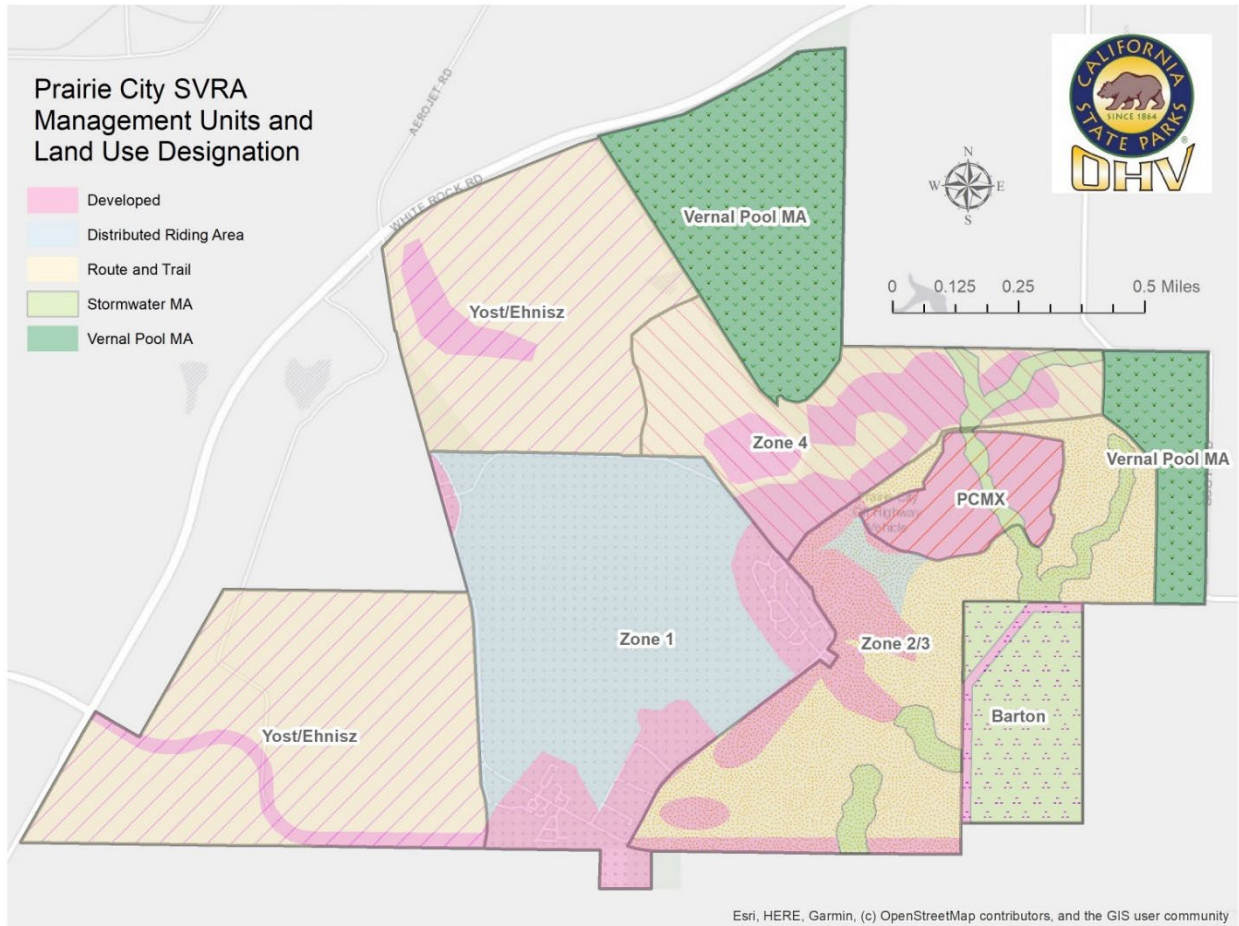


Figure 8. Management Units at Prairie City SVRA

Zone 1 MU is dominated by dredge tailings that support Mediterranean California naturalized annual and perennial grassland interspersed with elderberry, coyote bush, and cottonwoods. A few signed trails exist in the area and numerous user-created trails (Figure 9). The zone is designated as a distributed riding area in the GP, meaning visitors may use any existing trails, signed or not, but may not create new trails. A few isolated wetlands can be found in the western portion of Zone 1. The Park offices, ETC, and a few small concession-run tracks can also be found in this area.

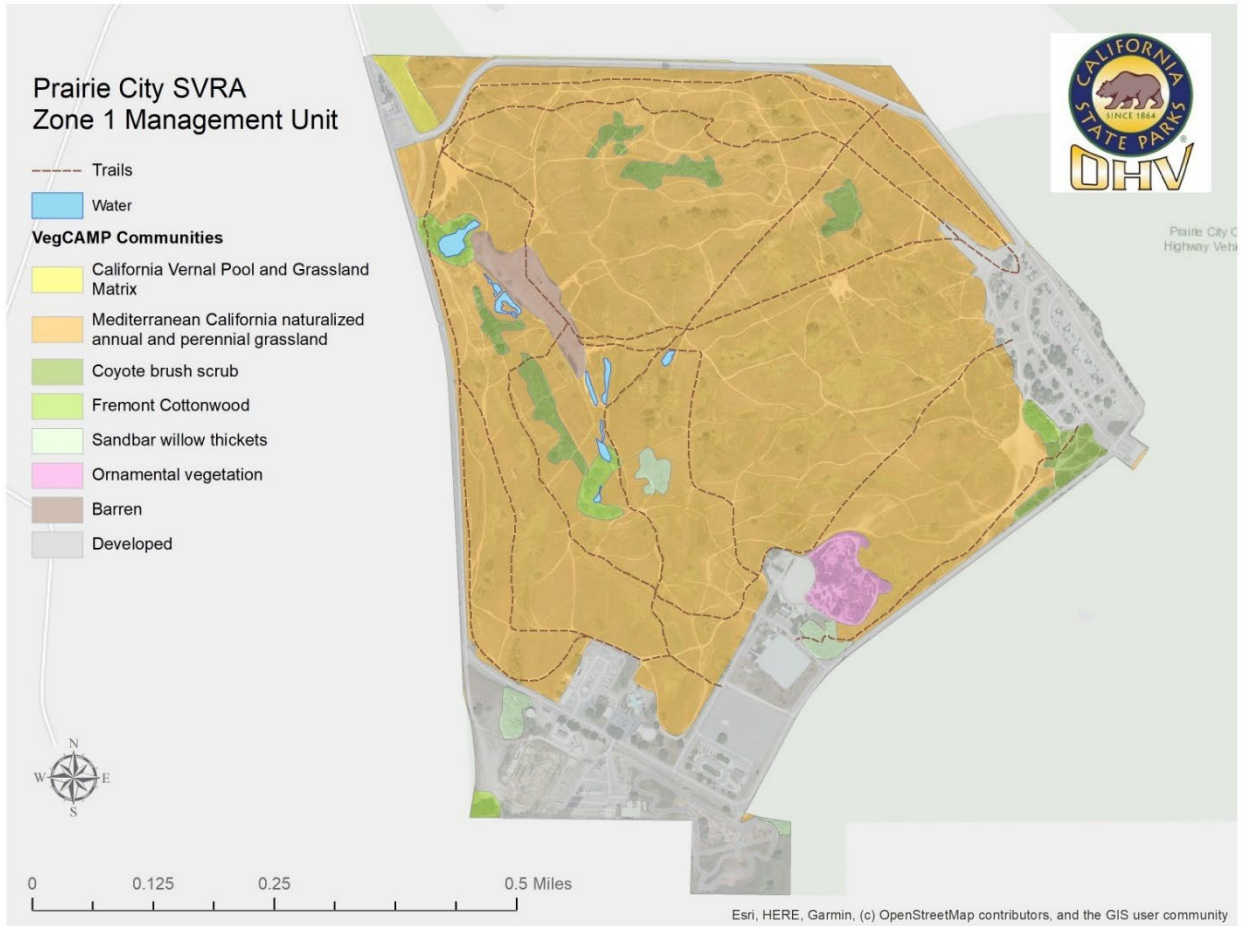


Figure 9. Zone 1 Management Unit

Zone 2/3 MU is an area of rolling hills composed of Mediterranean California naturalized annual and perennial grasslands with two main ephemeral drainages (Figure 10). This area is in the process of shifting from “open riding” to a designated route and trail system use area as identified in the GP. The transition process will be determined as part of the RTMP. Management activities include storm water and trail monitoring and possible restoration and new trail design in the future. Once use type and trail design have been identified, these two areas may be separated into different MU’s.

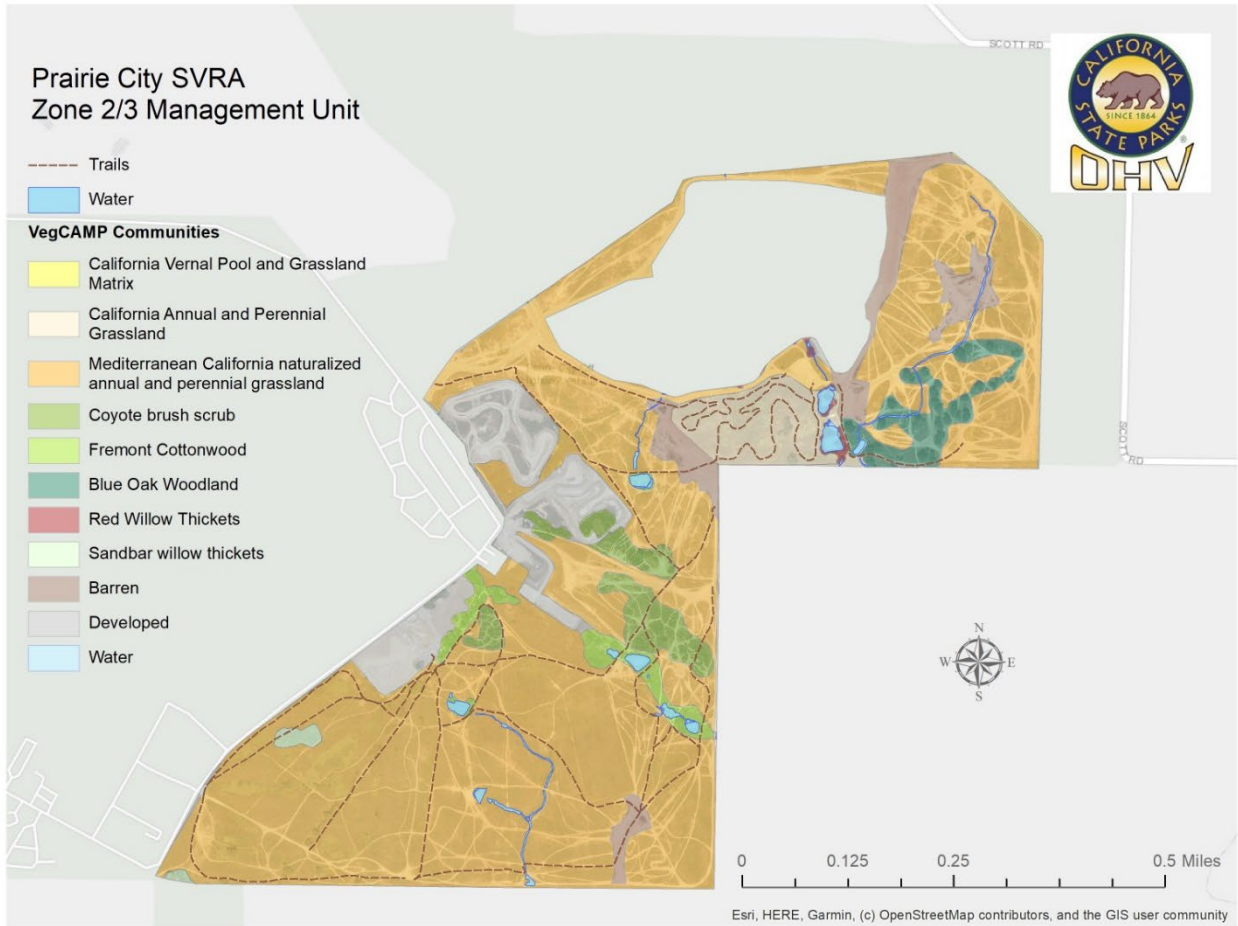


Figure 10. Zone 2/3 Management Unit

Zone 4 MU includes the northern portion of one of the Park’s main ephemeral drainages (Figure 11). This MU is a unique area for 4x4s, ROVs, and trials motorcycles that includes a mixture of obstacles, 4x4 track, special event facilities, and transitional areas of “open riding” to route and trail systems only area. Management activities include storm water and trail monitoring and possible restoration projects. Future facilities, obstacles, and trail design will be 4x4, ROVs, and possibly trial motorcycles specific.

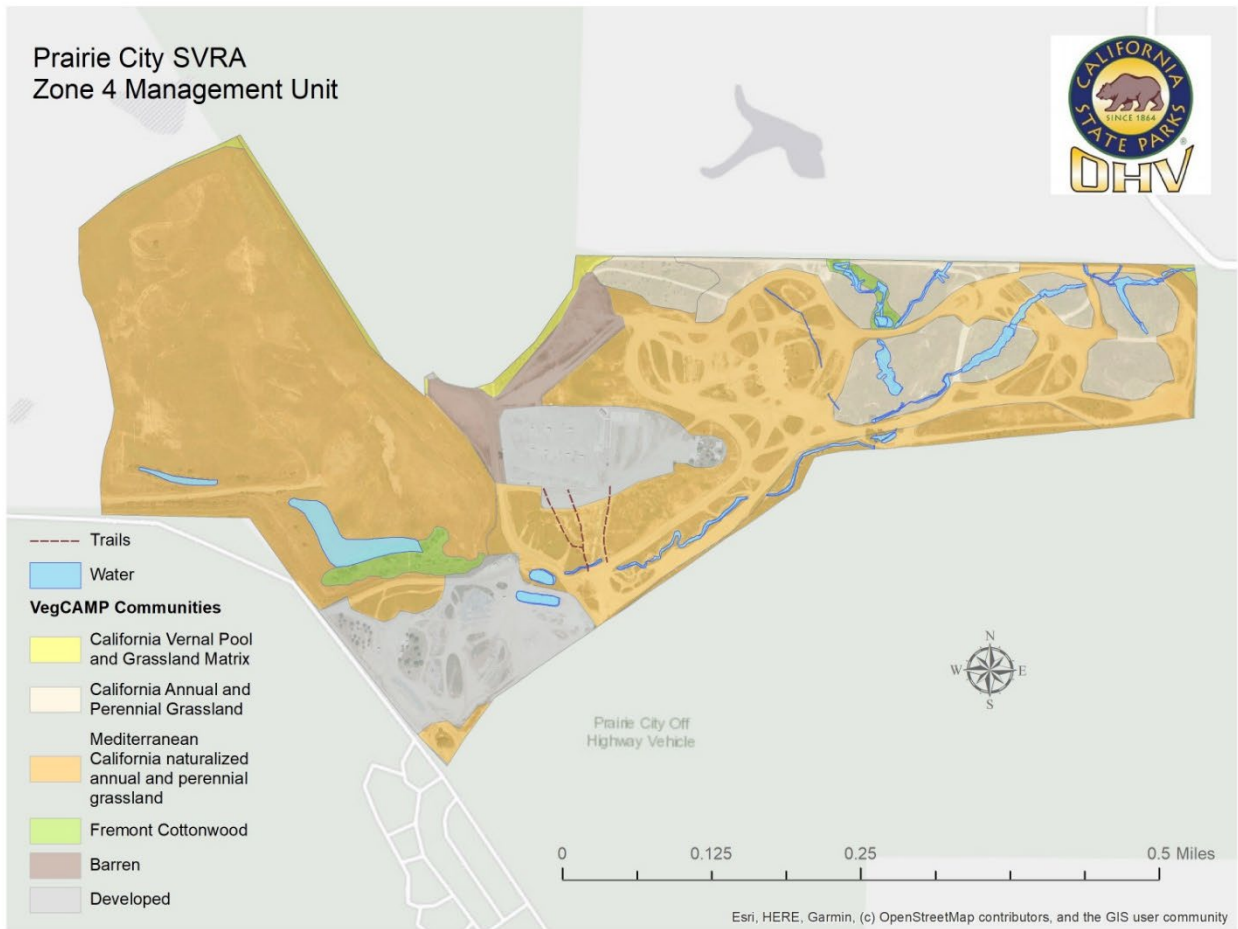


Figure 11. Zone 4 Management Unit

Yost/Ehnisz MU is a relatively flat annual grassland with some dredge tailings, vernal pools, and cottonwood woodlands (Figure 12). State Parks is in the process of opening previously closed areas to route and trail system use areas through the RTMP. Once the use type and trail design have been identified, these sections may be separated into different MU's.

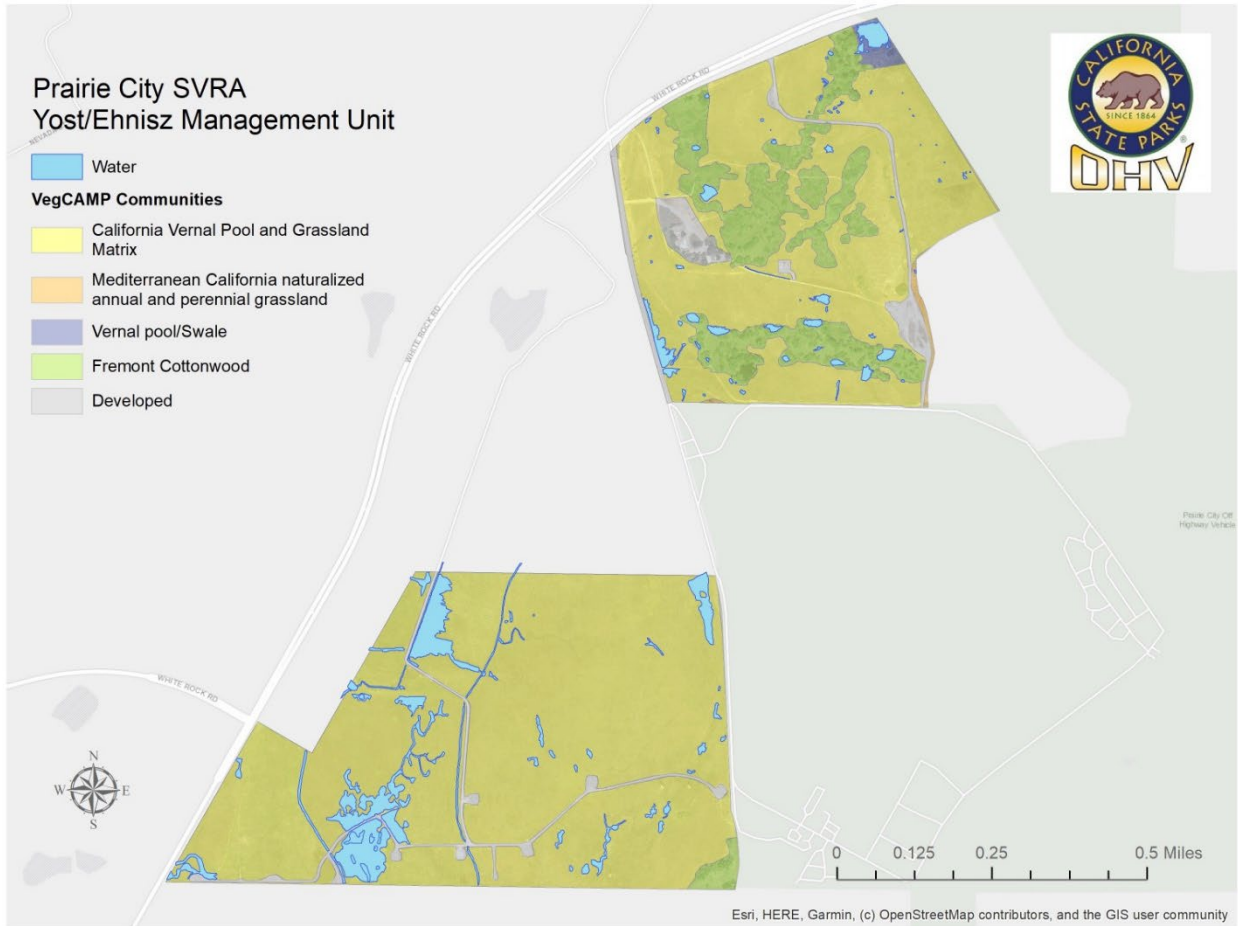


Figure 12. Yost/Ehnisz Management Unit

Barton MU is designated as a stormwater management area and is not open for motorized recreation but has potential for non-motorized recreation in the future. A tributary to Coyote Creek runs through the center, which supports blue oak woodland surrounded by annual grassland and the occasional vernal pool (Figure 13). A 100' easement abuts the northern and western boundaries.

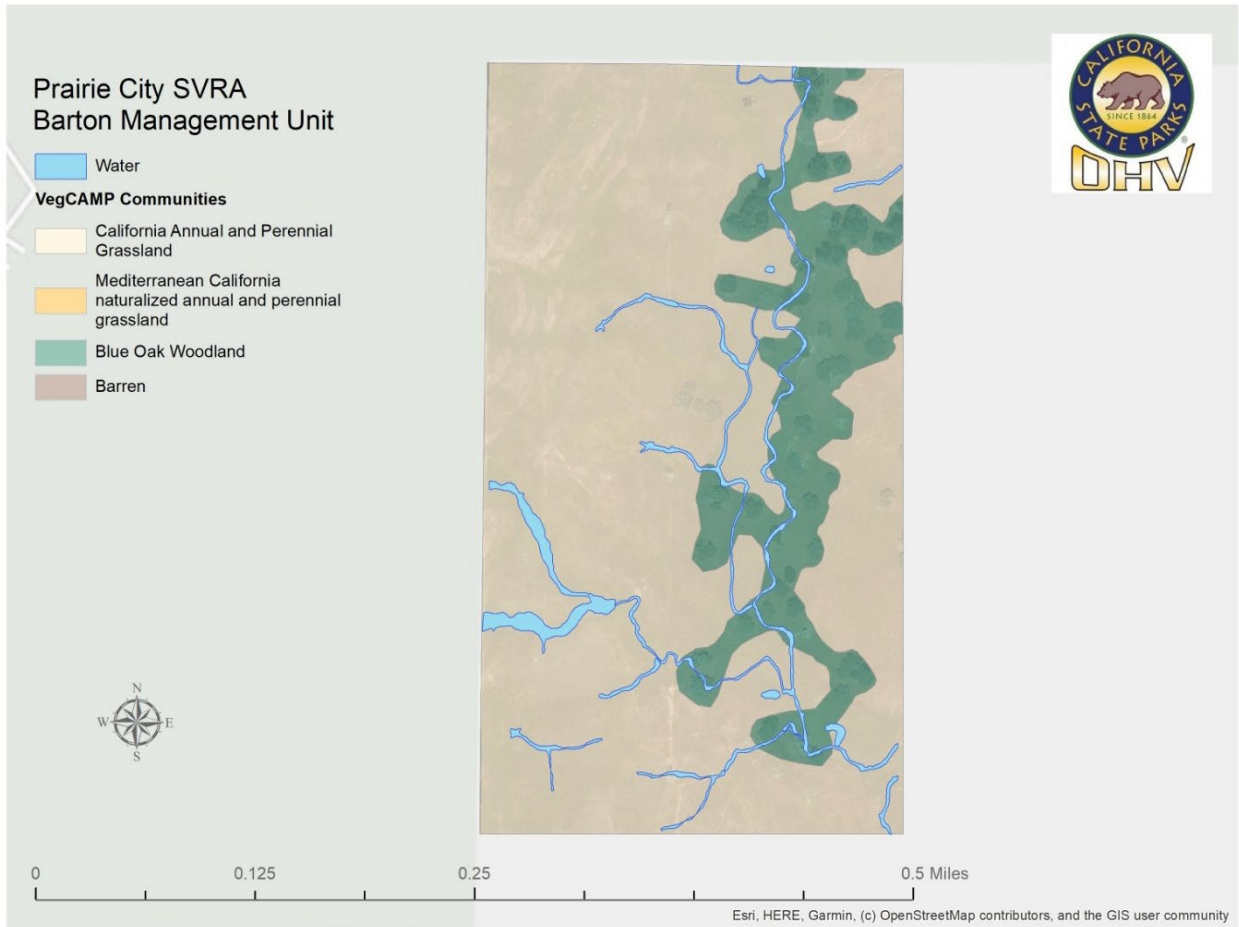


Figure 13. Barton Management Unit

Prairie City Motocross Track (PCMX) MU is an area within the SVRA that is managed as a concession area for professional motocross practicing and small special events through most of year and annually hosts the Hangtown Motocross Classic Race in May. This event is televised with food trucks, traffic control, and extra security detail. On average, there are 12,000 attendees, with a high of up to 30,000 attendees in the past. Roughly 50 acres of grassland is mowed for fuel reduction within parking areas each year. Ephemeral drainage runs through the middle of the track (Figure 14). Other concession areas, such as the kart track or quarter midget track, were omitted as specific management units as they are relatively small without distinguishing characters warranting special management actions.

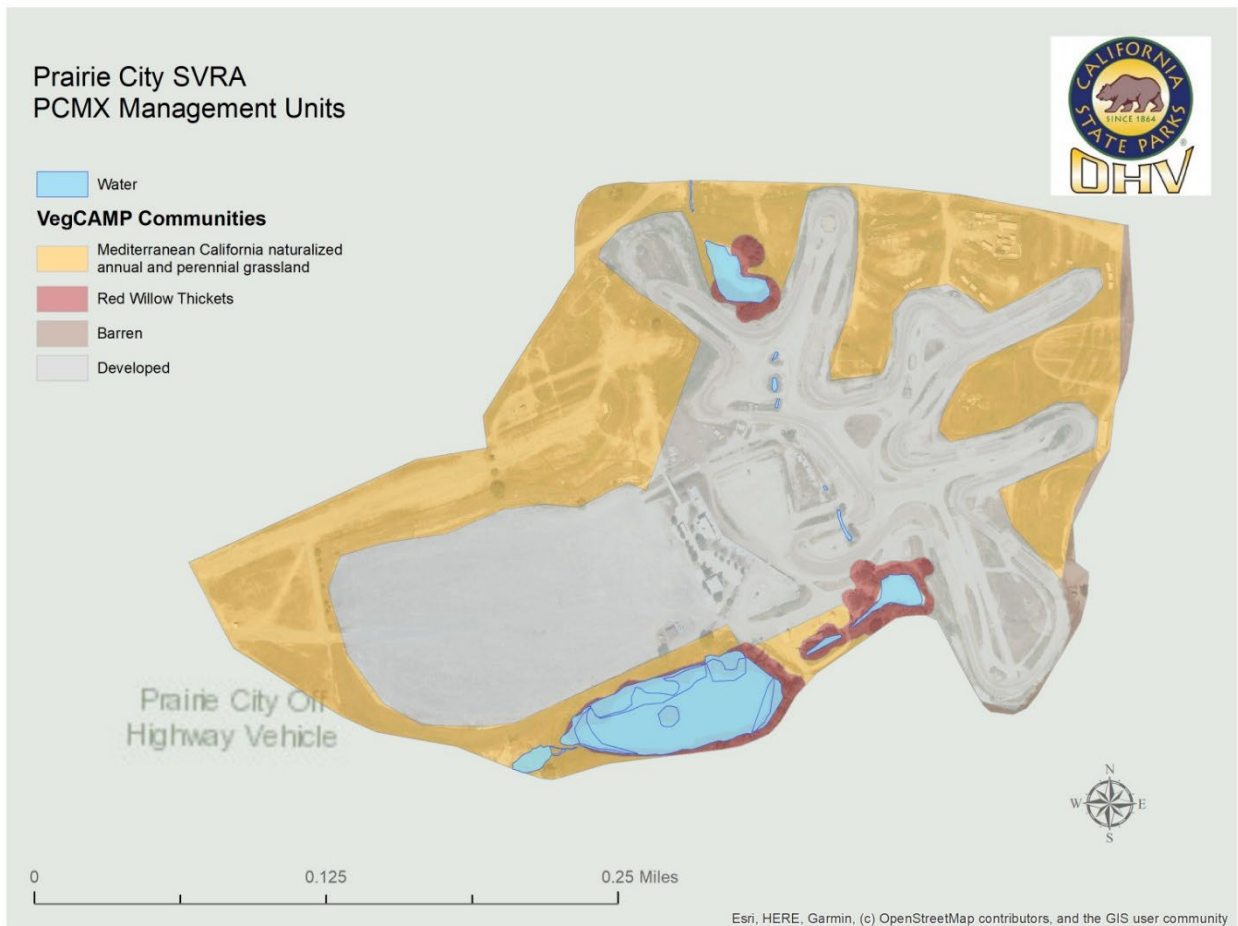


Figure 14. Prairie City Motocross Track Management Unit

Vernal Pool Management Area MU comprises annual grassland interspersed with vernal pools and is closed to motorized recreation (Figure 15). The MU has two subunits: A to the north and B to the east. Both subunits are priority prescribed burn locations as they are heavily infested with medusahead, an invasive annual grass. In spring, the park hosts vernal pool tours here for the public. Additional non-motorized recreation facilities may be planned here in the future such as walking trails that will be determined through the RTMP.

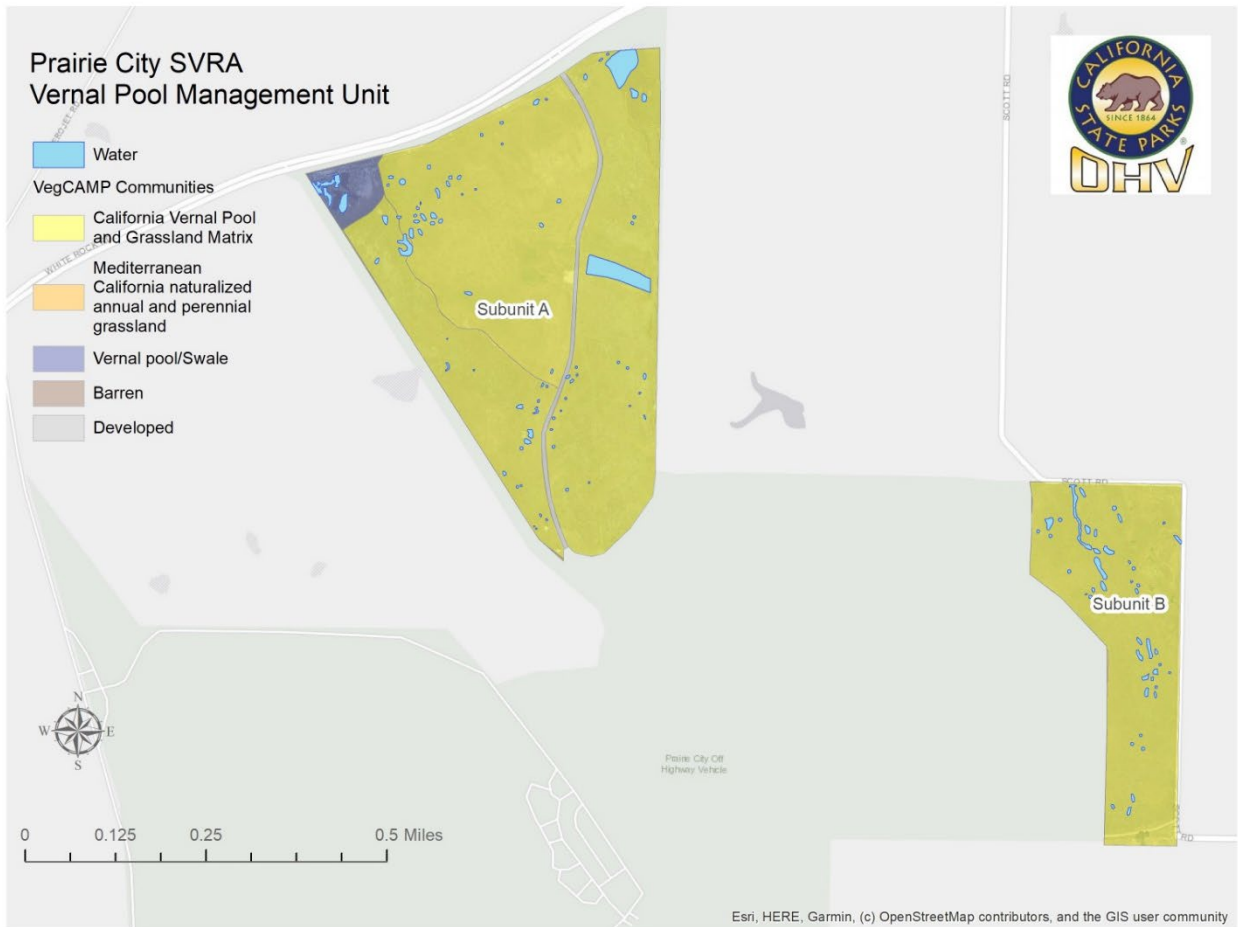


Figure 15. Vernal Pool Management Unit

2.3 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.

2.3.1 Soils

There are 14 different soil types within the Park (USDA 2021). The US Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey is the authoritative national source of soil survey information and uses the best available soil taxonomy (USDA 2021). In Figure 16, these soils are grouped into four different categories based on soil texture type for ease of understanding. All these soil types are moderately susceptible to water erosion, while sandy clay with silt is the only soil type particularly susceptible to wind erosion (CDPR 2016a). Many existing facilities and historically user-created trails and the main drainages are within this sandy clay with silt soil type. These areas are currently undergoing dust emissions management actions such as track and road watering and annual dust suppressant application. Gravely sand with silt and clay and sandy silt with clay types have moderate shrink-swell potential. The soil types have high clay content and are thus likely to undergo substantial volume changes as soil moisture content increases or decreases. Many wetlands and oak woodland habitats fall within these areas. Isolated wetlands and pockets of riparian or cottonwood forests can be found within the dredge tailing areas. See GP Section 2.3.1.1 for more detailed information on geology and soils.

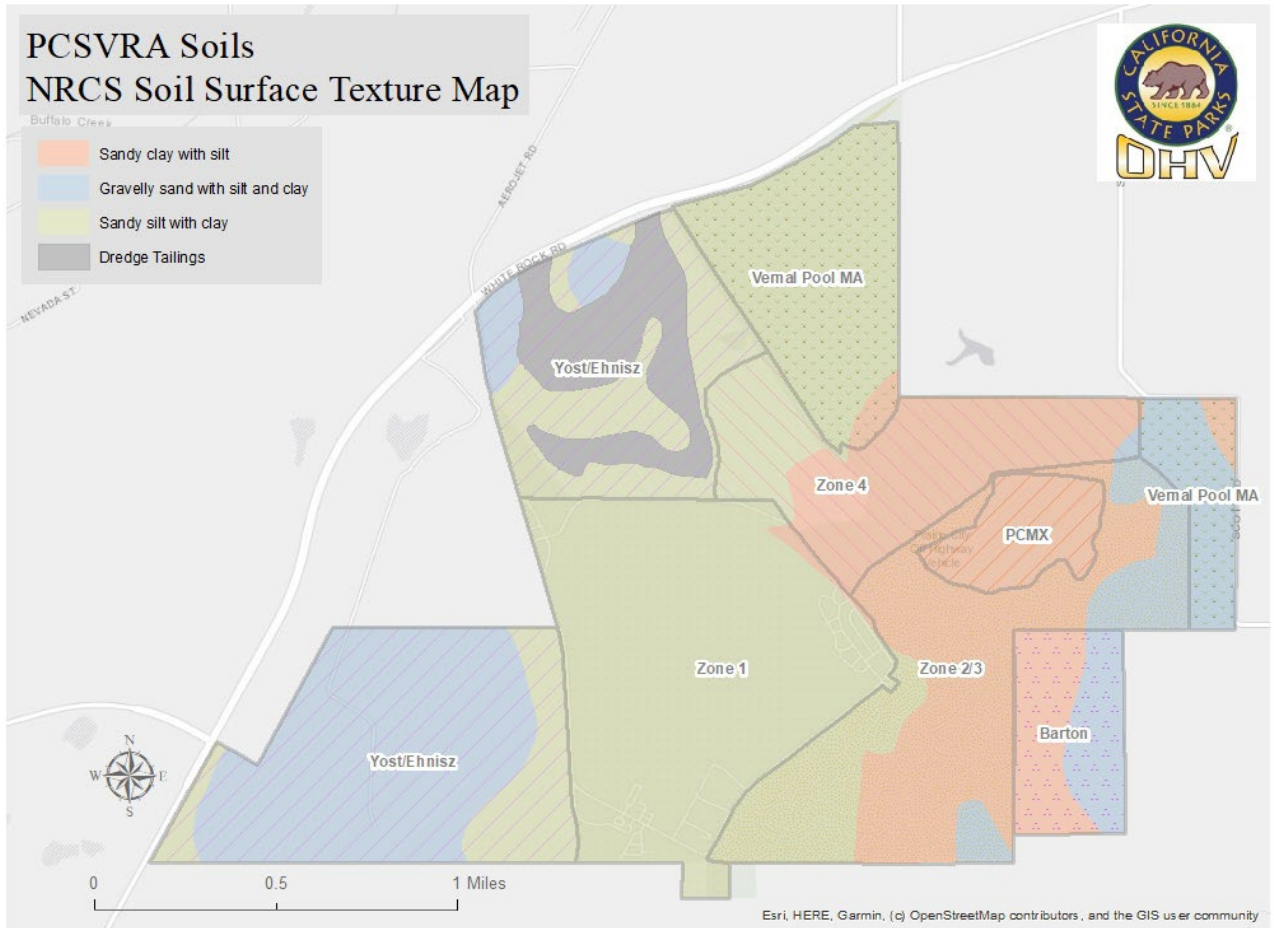


Figure 16. USDA-NRCS Sacramento County, CA Soil Map (CA067) within Prairie City SVRA (Data Source: USDA 2021)

Within the context of this WHPP, soils will be addressed specifically in their relation to providing habitat and ecosystem functions. The SCP will provide the details of soil management practices within the Park. Erosion of soil by wind, water, or vehicle use can increase airborne dust and reduce water quality, impacting vegetation, habitats, wildlife, and visitors within the Park and the surrounding area. Part of soil management is assessing erosion along trails, within waterways, and at watercourse crossings.

Road and Trail Erosion Evaluation

Roads and designated trails were mapped in 2018 and 2019 through initial planning of the RTMP and training from the Strategic Planning and Recreation Services Division. Routes were divided into segments and inventoried for all facility infrastructure, such as signs, fences, and watercourse crossings, and assessed for erosional issues such as rills, gullies, and undrained segments. An overall erosion severity rating was given to each road trail segment (Figure 17).

Many park roads are hardened and are maintained regularly to prevent unnatural erosion. However, many of the signed trails in Figure 17 were selected from historic user-created trails and may suffer from more unnatural erosion due to placement or lack of sustainable design. This initial assessment will serve as the basis for monitoring routes and determining maintenance priorities through the SCP (See Section 5.1 of the SCP for more details).

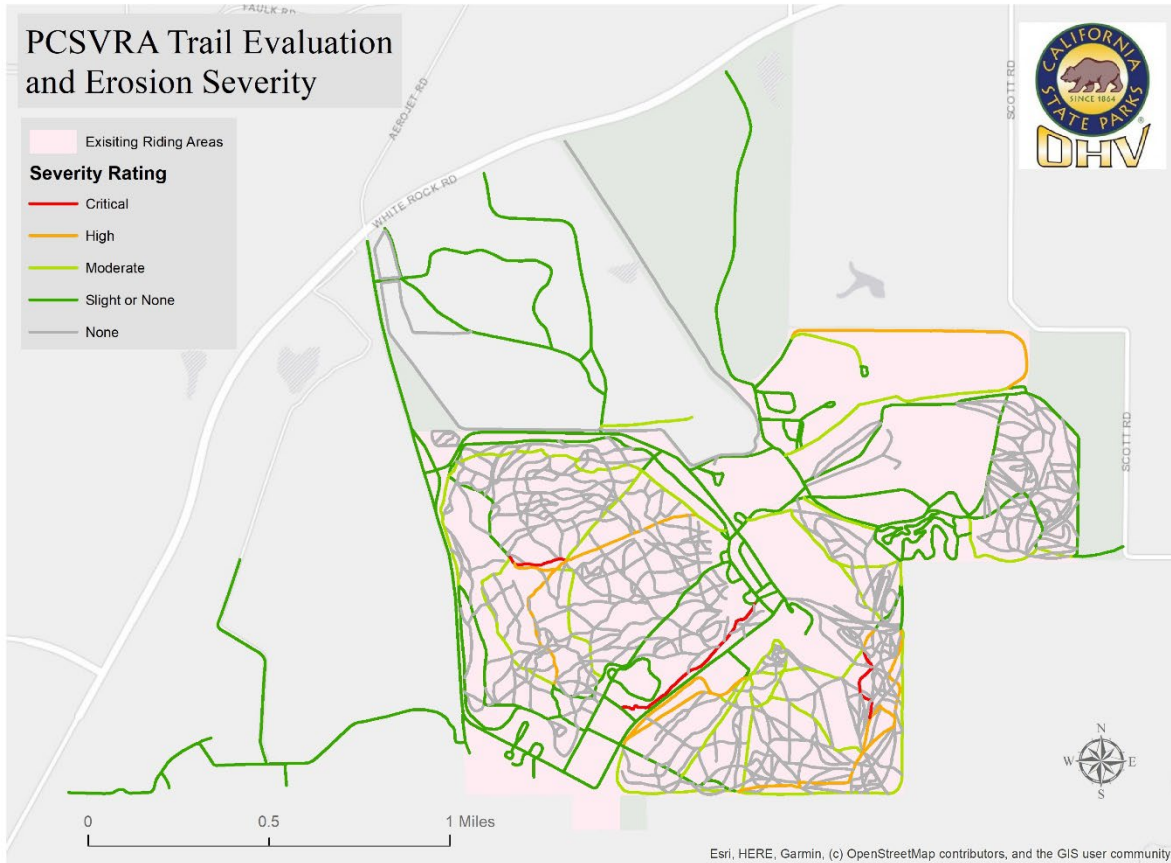


Figure 17. Erosion severity and trail evaluations at Prairie City SVRA.

Water Quality Assessment

Water quality is monitored during storm events at sampling sites within Prairie City SVRA (Figure 18). Sampling points were initially selected as part of the Capital Outlay Project to determine erosion control BMPs within the main drainages of the Park. These points are sampled for turbidity during storm events and indicate high priority areas in need of maintenance, repair, or restoration and where the greatest impacts to soils and aquatic resources impacted by soils are occurring.

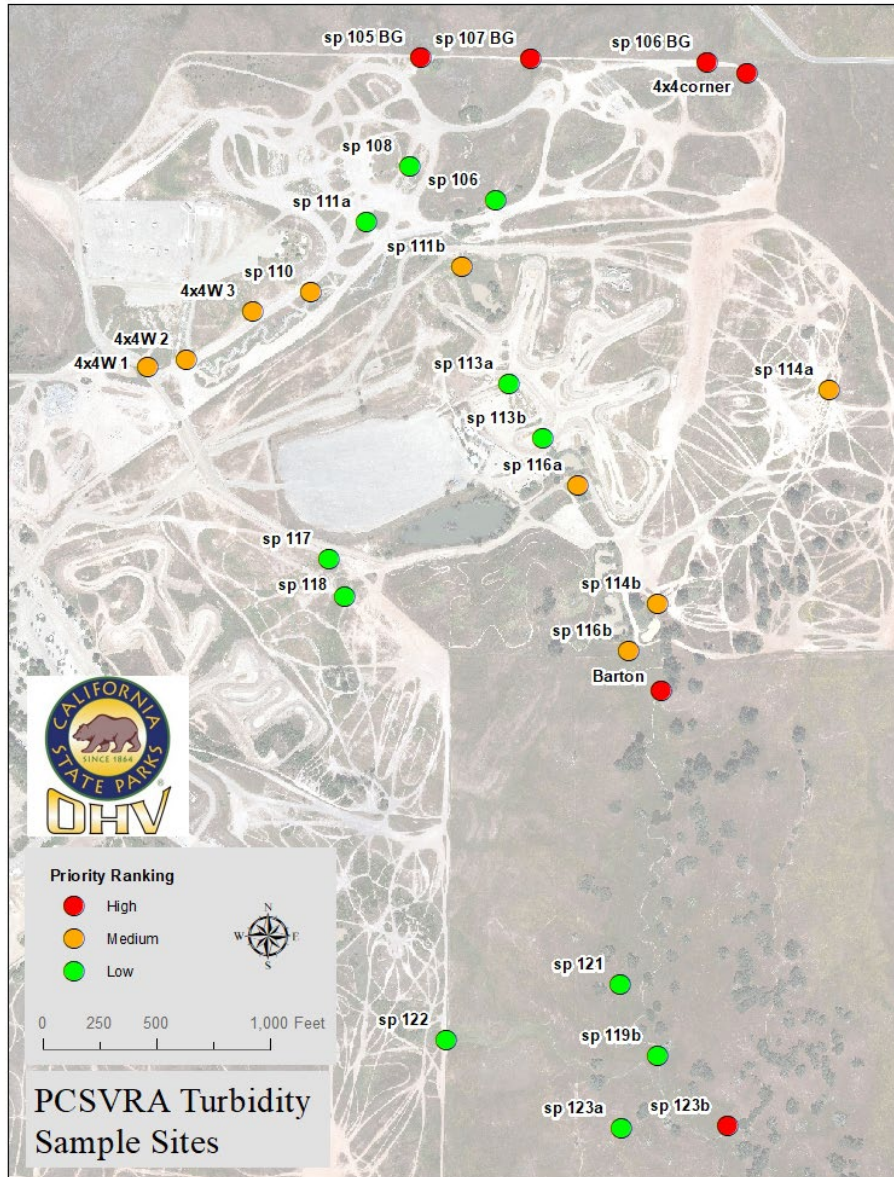


Figure 18. Water Quality Sample Site Locations

Watercourse Crossing Analysis

To conserve and improve soils, an analysis of watercourse crossing was conducted using computer Geographic Information System (GIS) analysis and past stormwater infrastructure, trail, and water quality monitoring (Figure 19) (CDPR 2021h). The analysis established maintenance priorities. Low priorities crossings have a minimal potential impact on soils, such as existing culverts or articulated concrete blocks to reduce sedimentation. High priorities have the potential for increased impacts due to the proximity to sensitive aquatic resources or do not have existing crossing infrastructure in place. The Park inherited many user-created trails

and the PCMX track, which are located within stream corridors. Management actions and projects will be designed to target soil erosion within these popular facilities. For more information on the trail and road tread condition, see Section 3.5.4 of the Prairie City SVRA SCP.

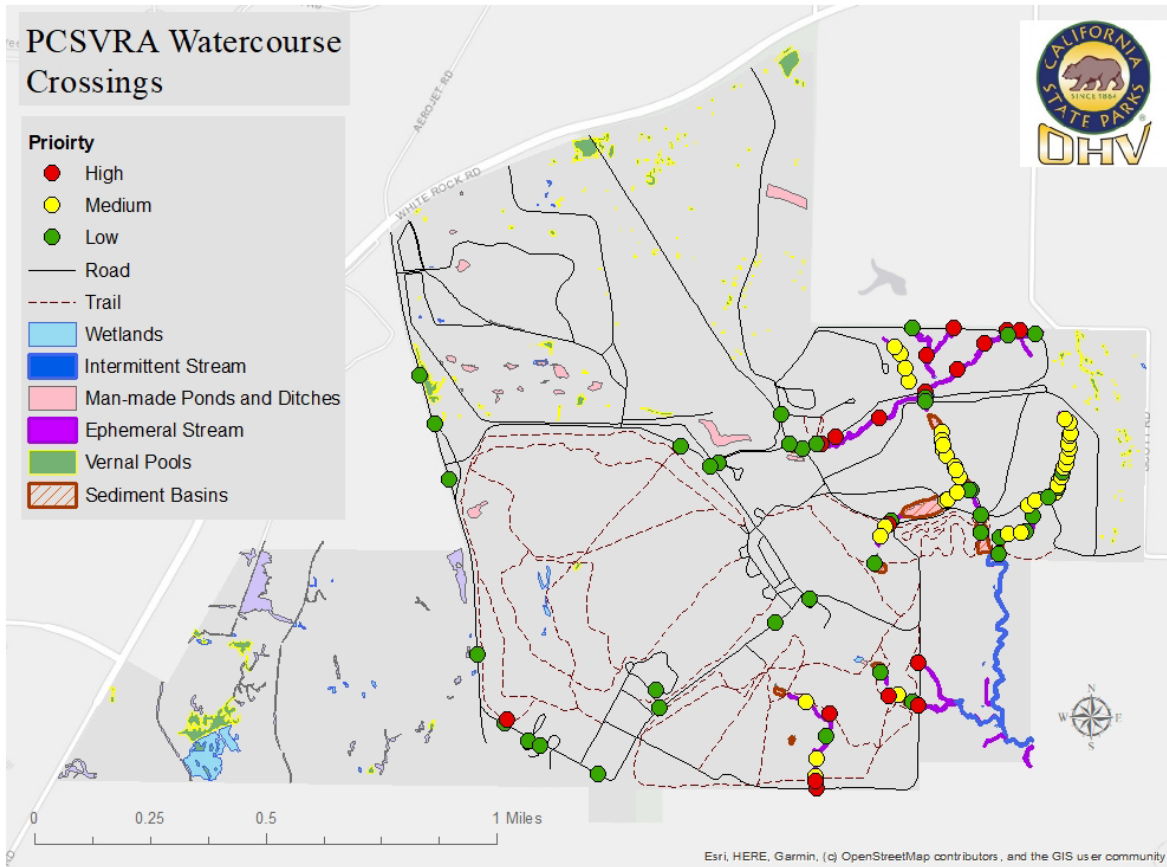


Figure 19. Watercourse Crossing Analysis

2.3.2 Wildlife Inventory

The wildlife inventory was initially compiled from the GP and then using reports generated from the CDFW California Natural Diversity Database (CNDDDB), United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Rare Plant Inventory. Each search referenced nine 7.5' USGS Quads - Citrus Heights, Folsom, Folsom SE, Clarksville, Buffalo Creek, Carmichael, Elk Grove, Sloughouse, and Carbondale - enclosing and surrounding the park footprint to ensure nearby occurrences were captured. These sources were accessed on April 7, 2021 and were 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 annual monitoring efforts as required by the Off-Highway Motor Vehicle Recreation Act of 2003, one-

time or site-specific surveys completed for projects undertaken within the Park, or incidental data obtained by park resources staff during day-to-day work. Further details on these assessments, divided by taxon or family group, are included below. The full wildlife inventory is available in Appendix 1, and additional, available detail on methodology and assessment of bias and uncertainties of these assessments can be found in Section 10 Appendix 2 and Section 12 Appendix 4.

General Biological Assessments

A general biological assessment was completed in 2013 to support the 2016 GP and Environmental Impact Report (EIR) (CDPR 2013b). All observed fauna and flora were recorded and identified to the lowest possible taxon; these taxa were added to a list combined from previous studies within the Park (See Appendix 2: 2013 Biological Resource Assessment). In 2016 and 2018, another general biological assessment was completed on the Ehnisz property purchased in 2015 (See Appendix 2: 2021 General Biological Assessment of the Ehnisz Property). The surveyors recorded all observed plant and wildlife species, characterized vegetation communities and associated wildlife habitats, and evaluated potential habitats for special-status species (CDPR 2021b).

Birds

Birds have been monitored using point count surveys at locations throughout the Park since 2010 (See Appendix 2: Habitat Monitoring Systems (HMS) monitoring- Avian Point Counts). These point counts are dependent on the expertise of the surveyors and their ability to detect species visually and audibly which can sometimes lead to inconsistencies between surveyors. OHMVRD contracted with Audubon and the Institute for Bird Populations (IBP) to improve the avian bird count methodology. IBP analyzed overall bird abundance and density relative to OHV trail cover trends using data from 2010-2015. As a result, the IBP recommended modifications to the monitoring methodology, including Audio Recording Units (ARUs) and bird song identifying software to accompany field observations to increase bird song detection probability and identification accuracy (See Appendix 2: ARU Bird Monitoring Methodology).

Bird presence, diversity, and richness have been thoroughly studied throughout the Park over the last ten years. The inventory is based on current data documented with the best available methodologies that consider imperfect detection and bias and is representative of the Park's overall avian biodiversity.

Mammals

Large mammals have been inventoried using trail cameras throughout the Park since 2011 (CDPR 2011-2020: HMS Reports). Since 2015 there have been about five to eight trail cameras deployed and continuously collecting data in target areas such as sediment basins or wildlife

movement corridors to maximize the likelihood of observing animals when they're seeking water or foraging. The analysis is for presence and observed richness and has a bias towards waterfowl on the sediment basins or wildlife that use game trails such as deer or coyotes.

Small mammal monitoring and inventory have not been thoroughly studied throughout the Park over the last ten years. A training trap night was completed in 2014 using Sherman traps but was not intended as a comprehensive survey (CDPR 2014b). Bats have not been surveyed at Prairie City. A new survey will need to be completed to update the small mammal inventory comprehensively. Surveys for small mammals are scheduled for 2023 to further inform and update the wildlife inventory.

Herptiles

Herptile presence has not been thoroughly studied throughout the Park over the last ten years. Dip-netting for amphibians was conducted annually for inventory data until 2013 (CDPR 2014b). No methodology was recorded for these events, so monitoring is not repeatable. A new survey will need to be completed to update the reptile and amphibian inventory comprehensively. Surveys for herptiles are scheduled for 2023 to further inform and update the wildlife inventory.

Invertebrates

Over the last ten years, invertebrate presence has not been thoroughly studied throughout the Park. Informal valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) exit hole surveys have been completed by park staff following the 2017 USFWS VELB Framework. Still, no exit holes or VELB have ever been observed within the Park.

Assessment-level wet season surveys for listed large branchiopods (a type of aquatic crustacean) were conducted in 2016-2017 by ECORP Consulting, Inc. (See Appendix 2: Large Branchiopod Monitoring Methodology). Suitable habitat was surveyed in a portion of the park, and vernal pool tadpole shrimp (*Lepidurus packardii*) was present in one pool (CDPR 2016b, 2017a). No vernal pool fairy shrimp (*Branchinecta lynchi*) were present during this survey but have been observed in the Park in the past (CDPR 2021c). Branchiopod habitat assessments are scheduled for 2023 in Zone 1 followed by listed large branchiopod occupancy surveys in the future. Additional surveys for other invertebrates such as bees and other pollinators may also be completed in the future.

2.3.3 Native Plant Inventory

Just as with the wildlife inventory, the plant inventory was initially compiled with reference to the GP, and using reports generated from CNDDDB, 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 10 Appendix 2 and Section 12 Appendix 4.

Rare Plants

Rare plant surveys were completed in the spring of 2011 and 2013 by a State Parks Botanist within the Vernal Pool Management Area (CDPR 2014a). The survey noted the presence of any special-status plant species and a general list of all plant species observed during the surveys. Another rare plant survey was completed for the Ehnisz portion of the Park in 2021 (See Section 10 Appendix 2).

Plant Communities

The native plant community inventory was compiled and mapped using the methods and standards in the CDFW's Vegetation Classification and Mapping Program (VegCAMP) (See Section 12 Appendix 4 for more detail). The steps include field surveys and digitizing vegetation community polygons using aerial imagery interpretation and mapping software. As part of the field survey, surveyors identified all observed plant species. Additional information and results can be found in Section 2.3.4.

Vegetation Cover

Prairie City SVRA resources staff analyze vegetation cover every two years using ArcMap and aerial imagery taken in the spring to establish an overall picture of vegetation cover and detect changes over time. This methodology was started in 2014 using the Normalized Difference Vegetation Index (NDVI) tool in ArcMap for Desktop (See Section 12 Appendix 4 for more detail). The 2020 analysis concluded the Park contains 1073 acres of vegetated cover. Of that, 973 acres are located outside of regularly maintained and operated facility areas (Figure 20). This GIS analysis does not classify vegetation cover based on vegetation communities like VegCAMP mapping. It uses the resolution of the aerial imagery to determine polygon size instead of a minimum mapping unit; therefore, the acres calculated from VegCAMP will be different and not comparable to the acres calculated from this analysis. More information on this monitoring protocol is found in Section 5.1 .

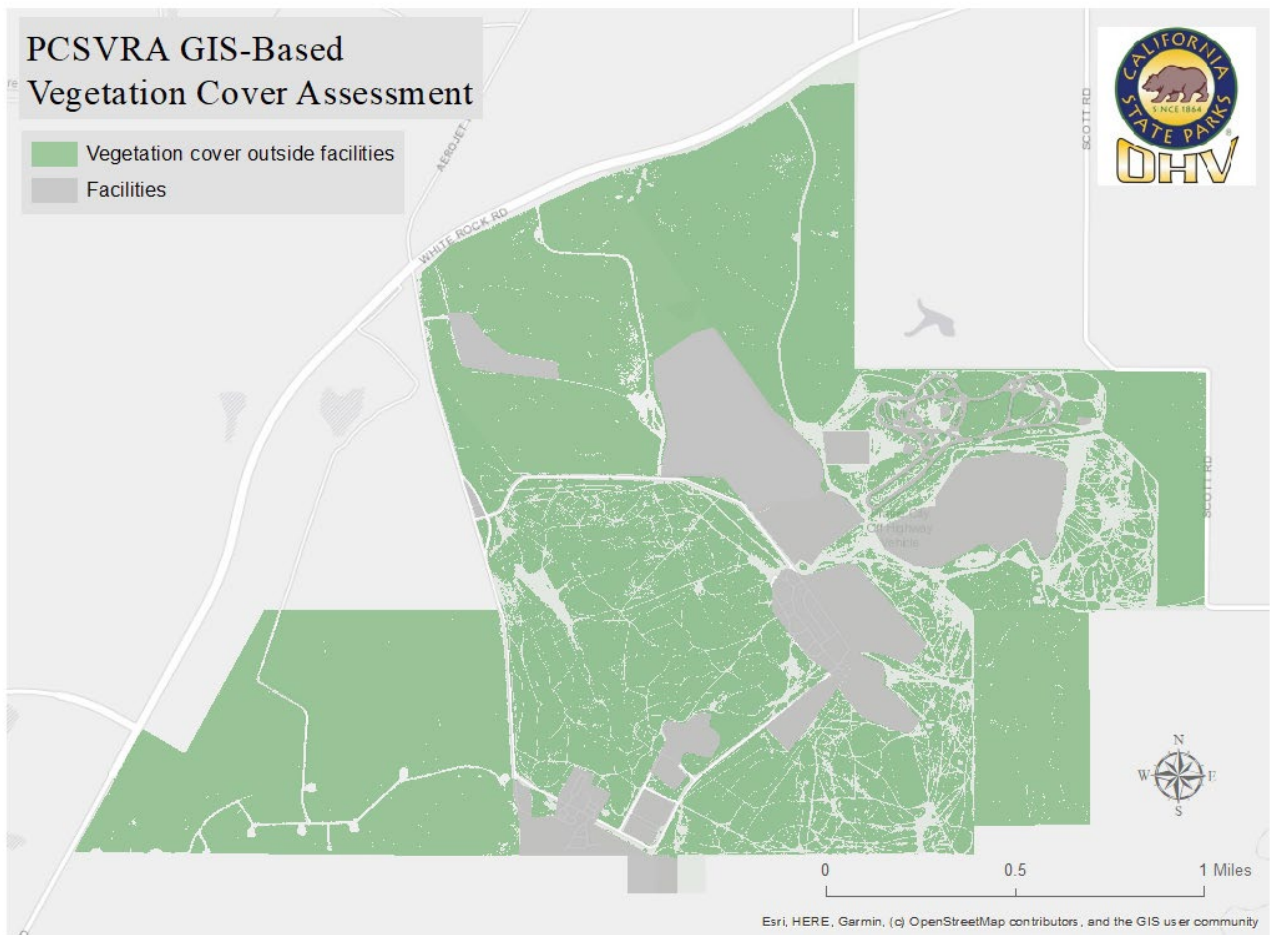


Figure 20. GIS-Based Vegetation Cover Assessment

Other Surveys

In 2013, a prescribed burn was conducted on 176 acres of vernal pool grasslands in Prairie City SVRA (CDPR 2014b, 2015). CNPS relevé surveys (analyzing a number of small plots of vegetation as a sample of a wider area) were completed before and after the burn to measure the efficacy of burn on invasive species richness and diversity (See in Section 10 Appendix 2). As part of the survey, staff identified all plant species present within relevé plots. This process was completed again in 2020 (CDPR 2021g), only the prescribed burn and resulting follow-up survey were never completed because CAL Fire was pulled off the projects to respond to numerous wildfires that summer (See Section 12 Appendix 4 for more detail).

MIG consultants delineated potential Waters of the US and Waters of the State in winter and spring of 2016 using the US Army Corps of Engineers standard wetland delineation protocols (CDPR 2020). This survey covered roughly half the Park and was representative of wetlands and waters within all habitat types in the Park. The delineation was submitted to US Army Corps of

Engineers for review and verification of jurisdictional waters in June 2020 (USACE ID 200800475). Final determination is still pending.

Over the last ten years, the native plant community has been thoroughly studied throughout the Park. The assessments detailed above are based on current data documented with the best available methodologies that consider imperfect detection and bias and represent the Park's overall biodiversity.

2.3.4 VegCAMP and Plant Communities

The distribution of vegetation types is shown in Figure 21. This data is intended to provide a baseline inventory for vegetation communities throughout the Park, provide information about wildlife habitat, and inform management decisions regarding conservation, restoration, monitoring needs, invasive species management, etc. Vegetation types are classified at different hierarchical levels due to 2021 VegCAMP surveying and mapping. An "alliance" is a fine-scale classification determined by the dominant species present (for example, Blue Oak woodland). Groups and macrogroups are a more coarse-scale hierarchical level used for vegetation types, such as grasslands, that are more difficult to define and map at finer scales. The vegetation types were mapped at a 1-acre minimum mapping unit for most types, which means that each vegetation polygon was no smaller than 1 acre. Wetland vegetation types are mapped at a quarter acre minimum mapping unit. More information about the vegetation types may be found at vegetation.cnps.org. The following descriptions are based on data and observations from 2021 VegCAMP surveys and information from the 2016 GP.

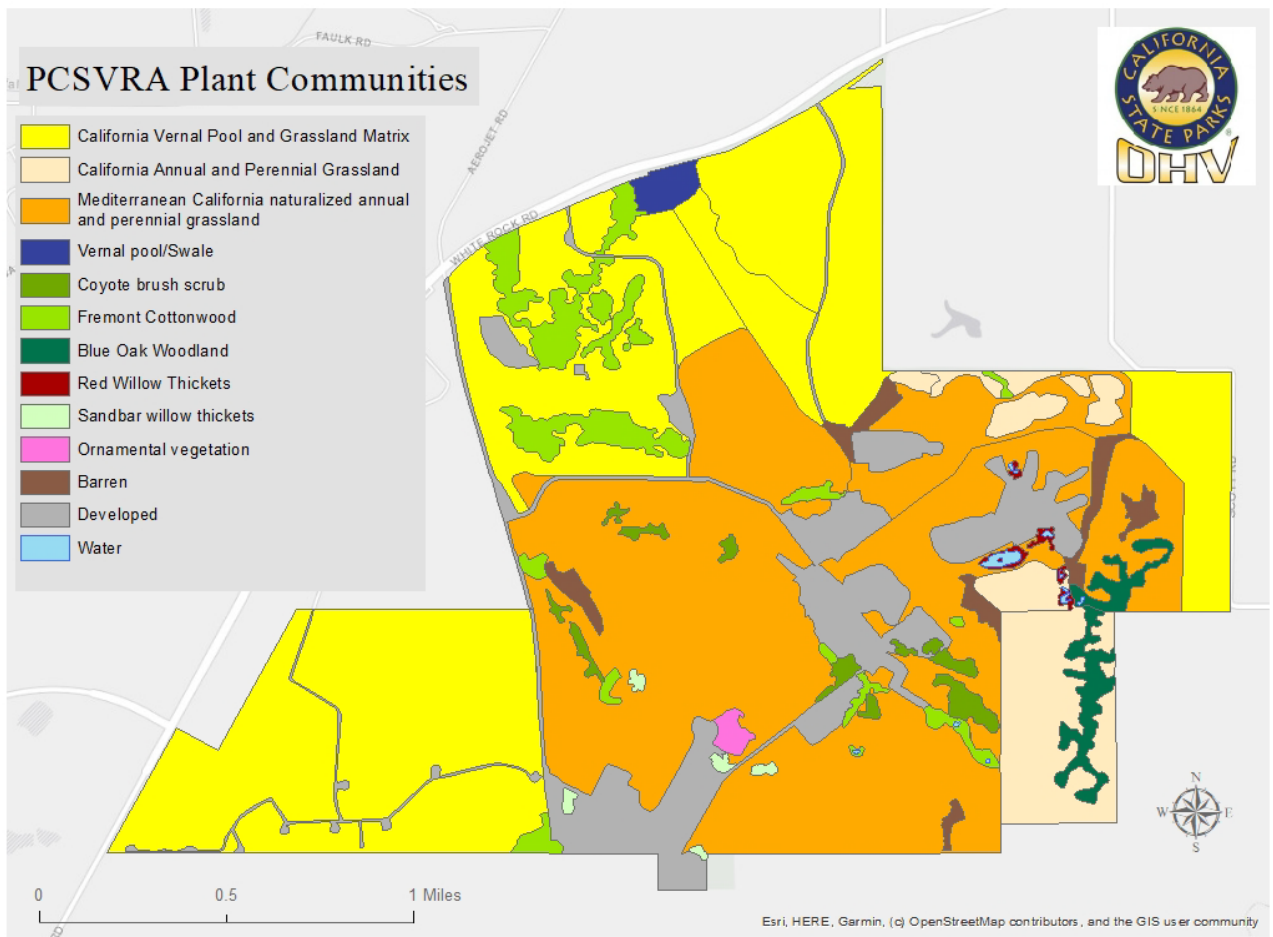


Figure 21. VegCAMP Classification and Mapping

California Vernal Pool and Grassland Matrix mapping unit – 511.1 acres: This mapping unit comprises upland grasslands, with small vernal pools scattered throughout. The vernal pools vary in size and density both spatially and temporally with variation in annual rainfall. Generally, there are more vernal pools within the vernal pool management areas than within the rest of “California Vernal Pool and Grassland Matrix mapping unit.” The grassland species and alliances are the same as in the California Annual and Perennial Grassland macrogroup, described below, including native species, sometimes with a high cover of non-natives, including the invasive grass medusahead (*Elymus caput-medusae*). Vernal pools, which may be only a few square meters in size, may vary in species composition annually depending on rainfall. Surveys have found vernal pool alliances *Layia fremontii* - *Achyrachaena mollis* and *Lasthenia fremontii* - *Downingia (bicornuta)*. Common species at Prairie City in these alliances include Fremont’s goldfields (*Lasthenia fremontii*), downingia (*Downingia spp.*), annual hairgrass (*Deschampsia danthonioides*), pale spikerush (*Eleocharis macrostachya*), stipitate

popcorn flower (*Plagiobothrys stipitatus*), and vernal pool buttercup (*Ranunculus bonariensis* var. *trisepalus*).

California Annual and Perennial Grassland macrogroup – 82.8 acres: This macrogroup represents grasslands with the characteristic presence of native perennial or annual grasses or forbs, even though non-native species may be significantly high in cover. The polygons are composed of multiple alliances that are patchy and blend such that they cannot be distinguished in aerial imagery but are mapped as one macrogroup. Common species include Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), bromes (*Bromus diandrus*, *B. hordeaceus*), Medusahead (*Elymus caput-medusae*), quaking grass (*Briza maxima*), little rattlesnake grass (*B. minor*), oats (*Avena barbata*, *A. fatua*), nonnative forbs such as filaree (*Erodium botrys*) and hairy vetch (*Vicia villosa* ssp. *villosa*), native annuals such as miniature lupine (*Lupinus bicolor*), frying pan poppy (*Eschscholzia lobanii*), white meadowfoam (*Limnathes alba*), valley tassels (*Castilleja attenuata*), narrow tarplant (*Holocarpha virgata*) and native perennial forbs such as naked buckwheat (*Eriogonum nudum*), blue dicks (*Dichelostemma capitatum*) and soap plant (*Chlorogalum pomeridianum*).

Alliances within this macrogroup surveyed in 2021 include the *Avena* spp. – *Bromus* spp. Semi-Natural Herbaceous Alliance, the *Lasthenia californica* - *Plantago erecta* - *Vulpia microstachys* Herbaceous Alliance, and the *Corethrogyne filaginifolia* - *Eriogonum (elongatum, nudum)* Herbaceous Alliance, as well as other native annual and perennial herbaceous assemblages that did not fit defined alliances.

Mediterranean California naturalized annual and perennial grassland group – 477.1 acres: These grasslands occur throughout the areas of the park that are open to riding and accommodating to high degrees of disturbance. They are characterized by a high cover of non-native species.

Californian mixed annual/perennial freshwater vernal pool/swale bottomland group (Vernal pool/Swale) – 6.9 acres: Other vernal pools are smaller than the minimum mapping unit, so they have not been mapped individually; instead, they are included in the grassland matrix described above.

Baccharis pilularis Shrubland Alliance (Coyote brush scrub) – 15.4 acres: This scrub habitat is in patches throughout the Park. Coyote brush scrub is found in upland locations on open slopes and terraces. Coyote bush (*Baccharis pilularis*) is the predominant species in this vegetation community. Other scrub-like plants in the community include elderberry (*Sambucus nigra* ssp. *caerulea*), poison-oak (*Toxicodendron diversilobum*), California coffeeberry (*Frangula californica*), and small slow-growing trees like interior live oaks (*Quercus wislizeni*).

Populus fremontii - Fraxinus velutina - Salix gooddingii Forest & Woodland Alliance (Fremont cottonwood forest and woodland) – 55.5 acres: The most abundant tree-dominated community

at Prairie City SVRA is cottonwood/willow stands, which total approximately 33 acres. This community is scattered throughout the Park, especially in low-lying areas created by previous dredging operations, along marsh banks, and within the Yost property in the northern portion of the Park. The canopy of the cottonwood/willow stand vegetation community consists of co-dominant native tree species such as Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*) and willows (*Salix* spp.).

Quercus douglasii Forest & Woodland Alliance (Blue oak woodland and forest) – 19.0 acres:

Blue oak woodlands are dominated by blue oak (*Quercus douglasii*) mixed with other oak species such as interior live oak and valley oak (*Q. lobata*). Gray pine (*Pinus sabiniana*) is often present as well. These areas are located almost exclusively in the southeast portion of the Park.

Salix gooddingii - Salix laevigata Forest & Woodland Alliance (Red willow thickets) – 2.9 acres:

These small stands surrounding seasonally-wet ponded areas are characterized by red willow (*Salix laevigata*) and Fremont cottonwood (*Platanus fremontii*).

Salix exigua Shrubland Alliance (Sandbar willow thickets) – 3.2 acres: Several small stands of these willow thickets grow densely with little herb cover. They are characterized by sandbar willow (*Salix exigua*), with some understory of other shrubs such as Coyote bush (*Baccharis pilularis*).

Ornamental vegetation - 3.4 acres: A mixture of native and non-natives planted for environmental training within the ETC.

Barren – 16.1 acres: Native substrate with less than 2% vegetation cover

Developed – 140.7 acres: Roads, parking lots, and buildings, including a gravel picnic area with ornamental trees.

Vegetation communities will be monitored every five years using the VegCAMP protocol to detect community changes over time. This data is intended to provide a baseline inventory for vegetation communities throughout the Park, provide information about wildlife habitat, and inform management decisions regarding conservation, restoration, monitoring needs, invasive species management, etc.

2.3.5 Sensitive Resource Areas

During the VegCAMP survey, a few communities were determined to be sensitive natural communities based on the global and state rarity ranking system. According to State rank, California Vernal Pool and Grassland Matrix, Fremont Cottonwood, and Red Willow Thickets are all sensitive natural communities (Figure 22). Vernal pools and other wetlands may support sensitive aquatic species and are considered sensitive resources. The land use designations of

the vernal pool and stormwater management areas within the GP acknowledge these features as sensitive aquatic resources (See Section 2.3.8).

There are also numerous elderberry shrubs within Prairie City SVRA. Elderberry shrubs with branches greater than one inch in diameter are considered potential habitat for the valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), an invertebrate federally listed as threatened. No VELB or exit holes have been encountered during informal consultation with USFWS in 2018 or during the following annual monitoring within the past four years, indicating the Park is unlikely to support VELB. However, the elderberry shrubs are still considered sensitive resources and will be treated as required under the 2017 USFWS VELB Framework (USFWS 2017).

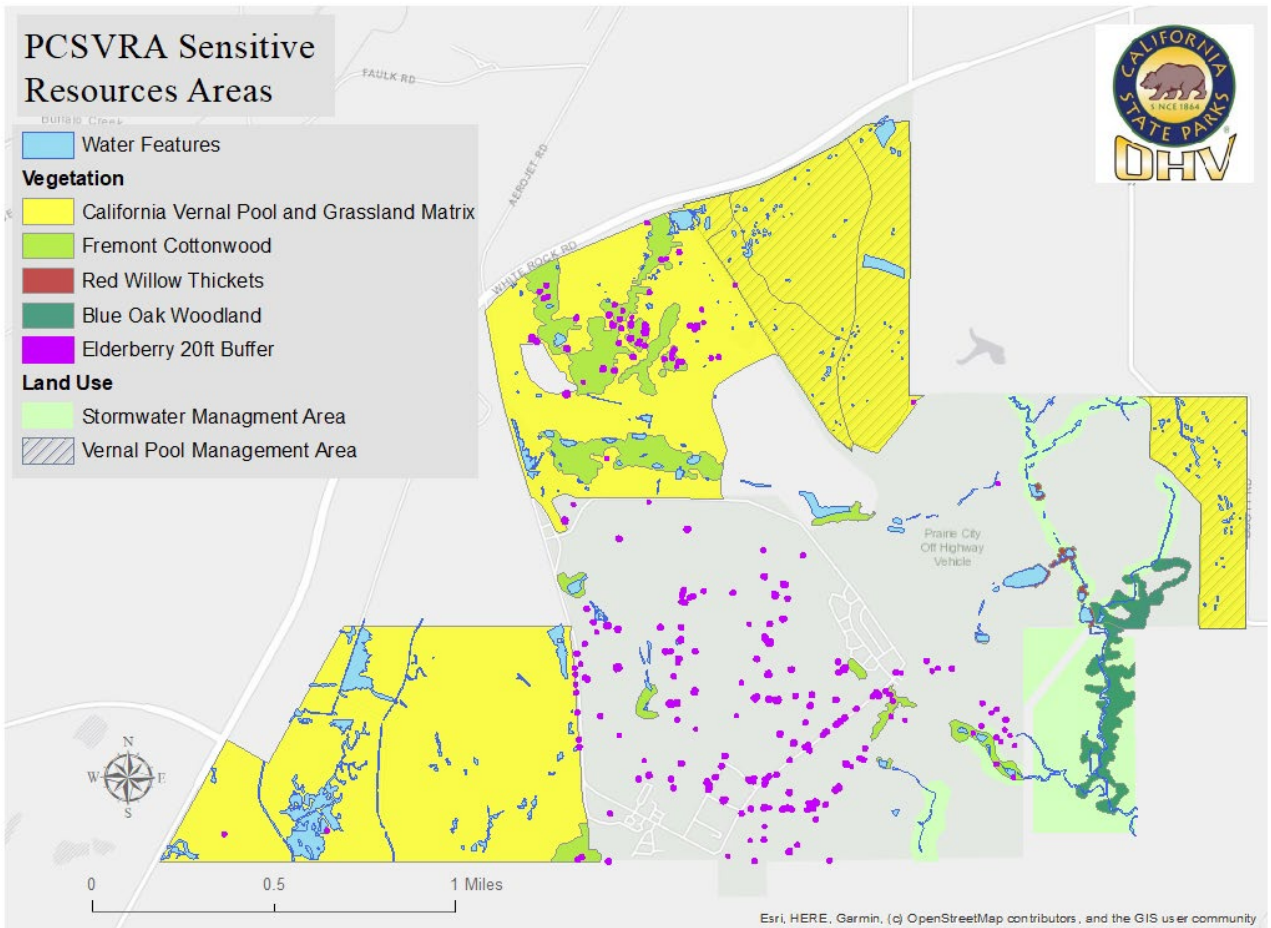


Figure 22. Sensitive Resource Areas within Prairie City SVRA.

2.3.6 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 federal or state listed as threatened or endangered
- Species considered as candidates or proposed for federal or state listing as threatened or endangered
- CDFW Species of Special Concern
- Fully protected species per California Fish and Game Code
- Plants considered by the CNPS and CDFW to be rare, threatened or endangered

The special-status species with potential for occurrence in the project area are listed in Appendix 1. Prairie City SVRA contains a habitat for several special-status species. In addition,

multiple special-status species and locally unique species have been found on or near the Park property (Figure 23). The data for this figure was downloaded from the government available BIOS. This content contains sensitive information and has been removed from the public document.

Figure 23. California Natural Diversity Database Occurrence Map. This content has been removed from the public document.

Some special status species recorded on the species list have not been observed within the Park for nearly ten years, have been observed only once, or have only been seen flying over the Park. These include the following: Golden Eagle, Bald Eagle, Bank Swallow, Willow Flycatcher, Olive-sided Flycatcher, American White Pelican, Grasshopper Sparrow, western pond turtle (*Emys marmorata*), and San Joaquin pocket mouse (*Perognathus inornatus*). Special status species observed more frequently are described below. Observations of special status species will be recorded and reported to CNDDDB.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp (*Branchinecta lynchi*) is a small freshwater crustacean that is endemic to and widely distributed in California (CDPR 2021). Members of this species can grow up to an inch and a half long, have stalked compound eyes, swimming legs that also function as gills, and no carapace (CDPR 2021b). As their name suggests, vernal pool fairy shrimp are mostly known to exist in vernal pools or other vernal pool-like habitats (e.g., temporary puddles and ponds, vernal swales, etc.). The species does not typically occur in permanent bodies of water as they have a largely ephemeral life cycle that depends on the seasonal inundation and drying of water features and the lack of any anti-predator defense mechanisms. This species is more commonly associated with shallower vernal pools (roughly 6 inches deep) with relatively short inundation periods (USFWS 2005). Pools at Prairie City SVRA typically range from 2 inches to about 2 feet deep depending on the rainfall.

During cold-weather winter storms, when vernal pools begin to accumulate water, eggs (referred to as cysts) hatch and mature into breeding adults. The time from cyst to maturity varies and is dependent on temperature. If conditions remain favorable, adults can reach maturity anywhere between 18-147 days (USFWS 2005). Adults, once mature, persist throughout the rainy season before dying off as pools begin to warm or the moisture dries out. When the temporary pools dry, offspring persist in suspended development as desiccation-resistant embryos in the pool substrate until the return of winter rains, and appropriate temperatures allow some of the cysts to hatch. Northern Hardpan Vernal pool communities, sensitive terrestrial communities listed in CNDDDB, are present at the Park and support vernal pool fairy shrimp, which are federally listed as threatened.

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp (*Lepidurus packardii*), like the vernal pool fairy shrimp, are small freshwater crustaceans. Vernal pool tadpole shrimp are distinguished from other vernal pool invertebrates by their large shield-like carapace covering approximately two-thirds of their body. Vernal pool tadpole shrimp range in size from 0.5 - 3.0 inches in length (USFWS 2005). Their current range extends across the entirety of California's Central Valley and in some regions of the San Francisco Bay area (CDPR 2021).

Vernal pool tadpole shrimp have a similar life history account as vernal pool fairy shrimp. They have a largely ephemeral life and survive in seasonally wetted habitat features such as vernal pools. They hatch from cysts and grow to maturity during portions of the year when pools are filled with water. Reproductive success and age of maturity are dependent on water conditions, such as temperature. Vernal pool tadpole shrimp cysts hatch in as little as four days following inundation. After that, they, on average, reach maturity around 25 days following inundation and reach their first reproduction at 54 days (USFWS 2005). Females, once mature, can have up to 6 clutches ranging in size from 32 to 61 cysts per clutch. Northern Hardpan Vernal pool communities are present at the Park and are known to support vernal pool tadpole shrimp. Vernal pool tadpole shrimp, which are federally listed as endangered was last observed during presence surveys completed in 2017.

Swainson's Hawk

Swainson's Hawks are seasonal migrants and breeding residents to California's Central Valley. They are large-sized hawks with broad wings, although their wings are relatively slender and pointed compared to other Buteo's. Swainson's Hawks nest in various habitats in the Central Valley, including oak savannah and riparian areas, which are most often found near a water source (CDPR 2021b). They primarily nest in small stands of trees, both native and non-native, that are adjacent to foraging habitats such as open grassland, agricultural fields, and/or other open and sparsely vegetated areas. Prairie City SVRA and the adjacent properties contain suitable nesting and foraging habitats. Swainson's Hawks have been regularly observed, both incidentally and during avian monitoring, soaring, and foraging along with the open grassland habitats and observed nesting within the Park's cottonwood or oak trees.

Tricolored Blackbird

The Tricolored Blackbird is a year-round and breeding resident bird species found throughout the Central Valley and the coast of California. Tricolored Blackbird conservation status recently upgraded to threatened by CDFW due to the loss of suitable wetland foraging and nesting habitats. Nesting colonies are typically found in flooded lands, margins of ponds, and grassy fields in summer and winter, providing typical foraging habitat for this species (CDPR 2021b). Colonies will also routinely consist of other blackbird species, including Red-winged Blackbirds. They forage primarily in agricultural lands and along ponds' edges and consume insects and

cultivated seeds and grains. Suitable foraging and breeding habitat for this species are present in and adjacent to the SVRA. Large flocks have been observed flying over and foraging in the grassland habitats at Prairie City SVRA.

Northern Harrier

Northern Harriers are a year-round and breeding resident raptor species found throughout California, including the Central Valley and the Sierra Nevada. They are listed as a Species of Special Concern by CDFW. Northern Harriers are slender, medium-sized raptors with owl-like faces. They exhibit an easily identifiable sexual dimorphism, with mature males being gray and females and immature hawks being brown. They are ground-nesting raptors and will use tall grasses and shrubby vegetation for nesting and roosting cover. Like other raptor species, they primarily prey upon small mammals, birds, amphibians, and reptiles (CDPR 2021b). Suitable nesting and foraging habitat for northern harriers is present in and on the lands adjacent to Prairie SVRA. While no nests have ever been observed, Prairie City SVRA contains grassland and wetland habitat features that reasonably could provide suitable nesting habitat. Northern Harriers are frequently observed by resources staff at Prairie City SVRA.

White-tailed Kite

White-tailed Kites are a year-round resident and breeding raptor found commonly along California's coast and Central Valley. They are listed as a CDFW Fully Protected species. White-tailed Kites are a relatively small-sized pale-colored raptor and tend to forage in open grassland-type habitats, including agricultural and grazing farmlands. They primarily hunt small mammals but prey on small birds, reptiles, and amphibians (CDFW 2005). White-tailed Kite foraging behavior is unique compared to other California raptor species, as they tend to stop mid-glide/soar and hover in place by rapidly beating their wings downward. Nesting habitat requires dense tree canopies, typically oak, adjacent to open grasslands or agricultural fields (CDFW 2005). Suitable foraging habitat is present in and adjacent to the SVRA and observed occasionally foraging at the Park. No nests have ever been observed.

Burrowing Owl

These diurnal owls were once fairly common throughout western North America. However, populations of owls have declined or, in some cases, disappeared altogether, primarily due to habitat loss, and are now listed as CDFW Species of Special Concern (CDPR 2021b). Burrowing Owls typically favor flat, open grassland or gentle slopes and sparse-shrubland ecosystems, but they can also colonize debris piles and old pipes. They require burrows for protection, cover, and nesting, are found in close association with fossorial mammals, and prey items include a broad array of arthropods. Prairie City SVRA has suitable habitat for foraging and nesting, although no nesting has been observed.

Loggerhead Shrike

In California, the Loggerhead Shrike breeds mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. Loggerhead Shrike requires tall shrubs or trees for hunting perches, territorial advertisements, pair maintenance, open areas of short grasses, forbs, or bare ground for hunting, and large shrubs or trees for nest placement (CDPR 2021b). Nests are usually built on a stable branch in a densely foliated shrub or small tree and are usually well-concealed. It also needs impaling sites for prey manipulation or storage, including sharp, thorny, or multi-stemmed plants and barb-wire fences. Loggerhead shrike eats arthropods (especially grasshoppers, crickets, beetles, and caterpillars), reptiles, amphibians, small rodents, and birds. Prairie City SVRA contains a suitable foraging habitat. There is a moderate potential that loggerhead shrike may nest in scattered coyote brush scrubs and riparian woodland habitats onsite (CDPR 2021b). In addition, park staff has observed this species within and/or near the property.

Legenere

Legenere (*Legenere limosa*) is a low-growing annual found in the Sacramento Valley into Northern California (USFWS 2005). Legenere is classified as rare within California. However, legenere is not listed under the Endangered Species Act at the federal or state level. Legenere grows in a variety of habitats, including vernal pools, vernal marshes, artificial ponds, and floodplains of intermittent streams (USFWS 2005). In May of 2015, resources staff accompanied by a State Parks' botanist, located a population in the vernal pool grasslands by the northeastern boundary of the Park. The population was estimated at 200 individuals and mapped utilizing a Trimble Juno GPS device. This data was shared with contractor Dokken Engineering, responsible for an initial study for the Capital Southeast Connector expressway, which included this area of the vernal pool grasslands in the study area (CDPR 2015). The land on which this population was discovered was sold to the Elk Grove- Rancho Cordova- El Dorado Connector Authority in February 2020 and is no longer owned, operated, or managed by Prairie City SVRA.

2.3.7 Non-native Invasive Species

Prairie City SVRA has many common, non-native plant species and a few non-native animal species documented within the Park (Appendix 1). American bullfrog (*Lithobates catesbeianus*) has been documented within the sediment basins and some water features throughout the Park. Park staff regularly see red-eared slider (*Trachemys scripta*), European Starling, Wild Turkey, and Brown-headed Cowbird. The Park inherited a few non-native ornamentals such as Chinese pistachio (*Pistacia chinensis*) and fruitless mulberry (*Morus alba*) within the staging areas. The ETC features six biome areas with native and non-native ornamental species for educational purposes.

During the 2021 VegCAMP survey, non-native plant cover was estimated either during the field surveys, gathered from past surveys, or inferred from context if there was no field data. The

exotic cover was not determined within facilities. Since not all of the Park has been quantitatively surveyed for exotic cover, the VegCAMP data has been broken into qualitative categories as follows:

- High – Over 50% of the polygon is covered with non-native plants; percent cover is determined using absolute cover.
- Moderate – Between 25% and 50% of the polygon is covered with non-native plants.
- Minimal – Between 5% and 25% of the polygon is covered non-native plants.

Figure 24 shows the best available distribution of non-native plant cover within the park with 400.8 acres of high cover, 570.9 acres of moderate cover, and 232.1 acres of minimal cover.

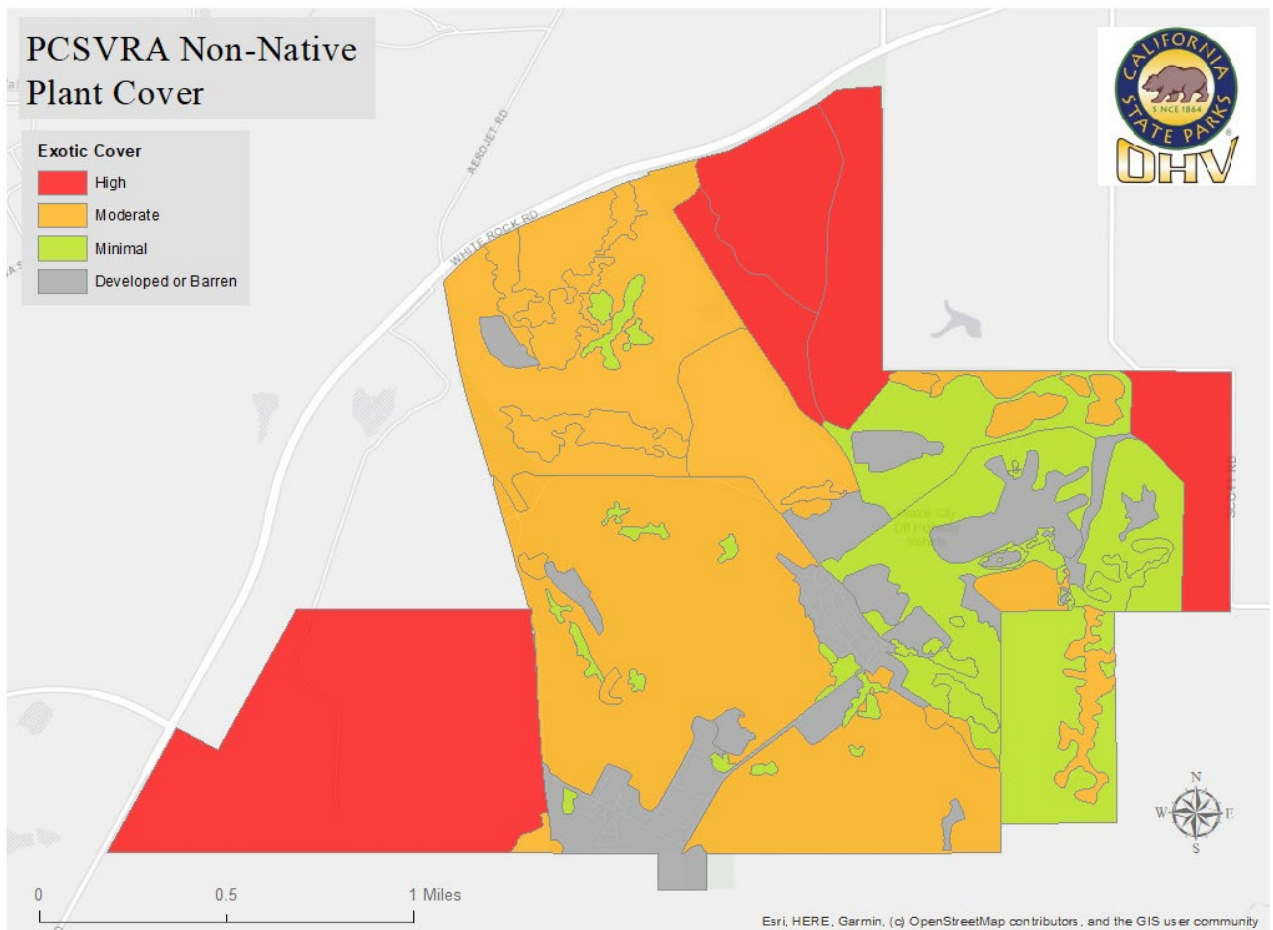


Figure 24. Non-native Plant Cover throughout the Park

Common invasive plants include medusahead (*Elymus caput-medusae*), barbed goatgrass (*Aegilops triuncialis*), stinkwort (*Dittrichia graveolens*), yellow-starthistle (*Centaurea solstitialis*),

black and field mustard (*Brassica nigra*, *Brassica rapa*, *Hirschfeldia incana*), and other naturalized non-native grasses commonly found throughout California. An invasive plant species can physically compete with and exclude native plants, negatively alter ecosystem functions such as water availability or fire regimes and change food availability hierarchies. Common invasive species are well established and usually suited to spread faster than native species making it harder to manage within the Park. A few invasive species are given higher priority for removal, including medusahead and barbed goatgrass, within the Vernal Pool Management Areas.

Smaller populations are much easier to manage and remove compared to widespread species and can be monitored and treated in a process known as Early Detection and Rapid Response (EDRR). Prairie City SVRA resources staff received EDRR training in the spring of 2021. They will initiate a pilot EDRR program focusing on sensitive habitat areas such as the Vernal Pool MU and areas where prior restoration efforts have occurred, such as Oak Hill Trail Area and the Whale project area, in 2022 (Figure 25).

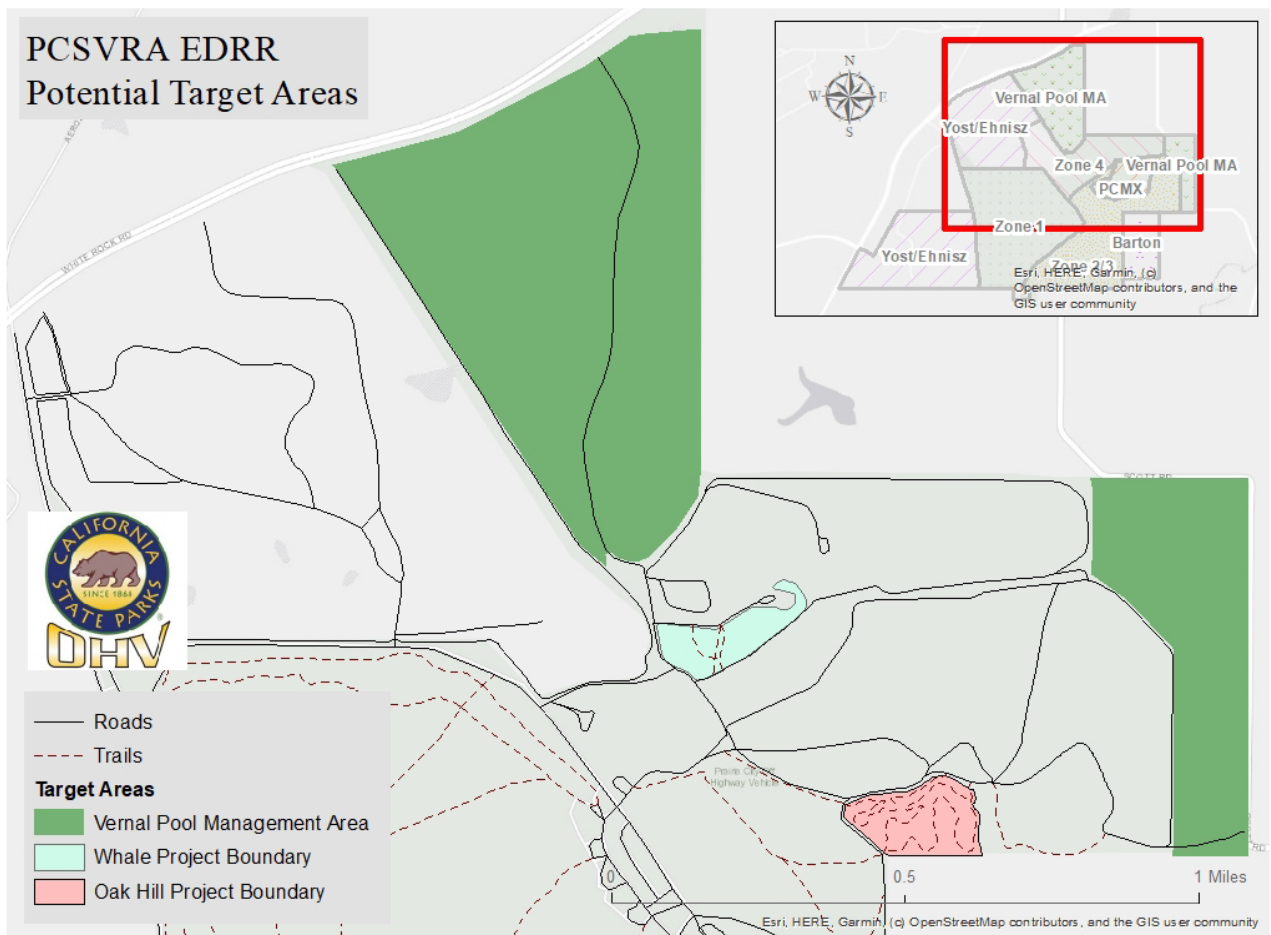


Figure 25. Potential EDRR Target Areas for Invasive Plant Removal

2.3.8 Sensitive Aquatic Habitats

Figure 26 shows all currently known sensitive aquatic resources within the Park. These may support special status aquatic plant and animal species or be under the jurisdiction of another agency such as the Army Corp of Engineers or CDFW for project-related activities. There are 0.98 acres of an intermittent stream, 2.6 acres of ephemeral stream, 11.2 acres of vernal pools and swales, 9.4 acres of general wetlands, and 13.4 acres of man-made ponds and ditches. Sediment basins make up 4.1 acres of the last category. These basins are cleaned annually of any accumulated sediment under a CDFW Lake and Streambed Alteration Agreement 1600-2016-0154-R2 which includes nesting bird surveys beforehand (For more information on this maintenance, see Section 5.3 of the SCP).

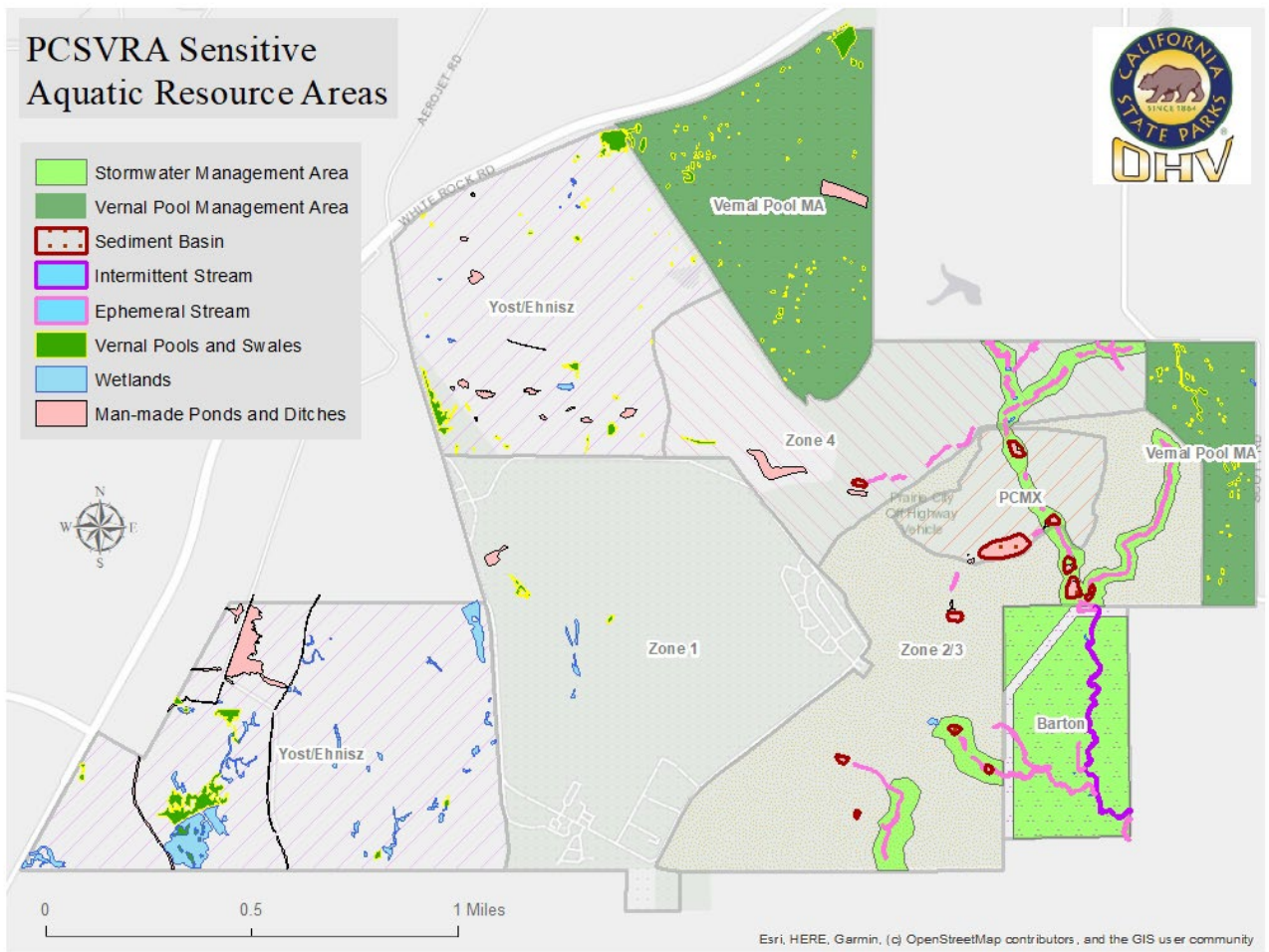


Figure 26. Sensitive Aquatic Resources

The stormwater management area land use designation from the GP provides for some run-off treatment and filtration before the water hits the sensitive waterways (Figure 26). The 2020 Soil Conservation Standard and Guidelines recommend more specific watercourse and lake protection zones based on watercourse type and the surrounding slope. There is only one intermittent stream, or Class II watercourse based on the Soil Standards, within the Park. It is located on the Barton property, which is closed to motorized recreation and already within a stormwater management area. The ephemeral streams, or Class III watercourses, run through Zone 4 MU, Zone 2/3 MU, and PCM MU. Most of these features are already within the stormwater management area, allowing limited OHV recreation while instituting stormwater management measures to prevent water quality degradation and soil loss, such as a vegetation buffer along the drainages. Additional protections are determined as needed to protect wetlands and ephemeral streams not within the stormwater management areas.

2.3.9 Wildlife Movement

Habitat corridors facilitate wildlife migration and movement within landscapes and are essential to the viability and persistence of many wildlife populations. Wildlife movement includes migration, inter-population movement, and small travel pathways (i.e., daily movement corridors within an animal's territory). While small travel pathways usually facilitate movement for daily home range activities, such as foraging or escape from predators, they also connect outlying populations and the main corridor, permitting an increase in gene flow among populations. These linkages among habitats can extend for miles and occur on a large scale throughout California.

The Park is near two essential habitat connectivity areas and numerous small natural landscape blocks (Figure 27) and within a large natural landscape block, based on CDFW's Essential Habitat Connectivity Project data (Spencer et al., 2010) which was downloaded from BIOS. A variety of species move within and through the Park. Barton Ranch is part of a larger open space corridor between Highway 50 to the north and Highway 16 to the south. Wildlife may move along stream corridors or between habitat patches within oak woodland or cottonwood forests. Wildlife friendly fencing has been established throughout the park by cutting sections of fence away along known paths. New fencing is always installed approximately one foot off the ground and includes areas cut away to encourage wildlife passage.

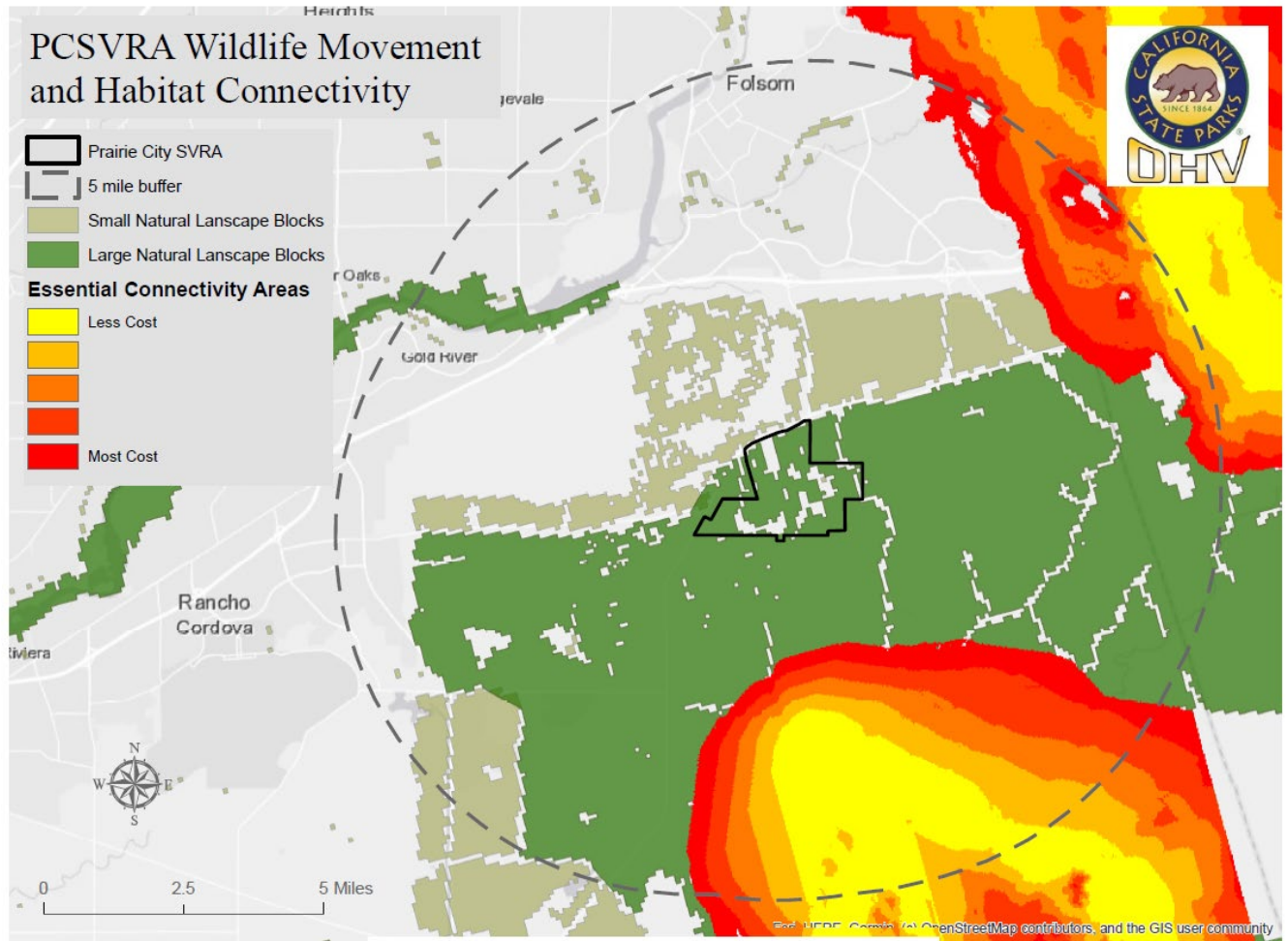


Figure 27. Wildlife Movement and Habitat Connectivity to the Surrounding Area (Data Source: Gogol-Prokurat, Melanie. 2014, 2018).

A few barriers to wildlife movement exist outside the Park’s control. Sometime in the future, Teichert will be constructing a conveyor belt along the north and northwestern fence lines on Barton MU within their easement (See Section 2.1.4). This completely fences and essentially cuts off this area from the rest of the park unless negotiations are successful in enlarging the culvert below the easement along the unnamed tributary to Coyote Creek to become a crossing. Additionally, the Park has little influence over surrounding land use, such as the extensive urban development approved by the Cities of Folsom and Rancho Cordova including the [Capital SouthEast Connector Expressway](#) conversion of White Rock Road and Grantline Road to the north and northwest of the Park.

2.3.10 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 restoring 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.

3 WHPP GOALS AND OBJECTIVES

Setting goals and objectives clarifies the outcomes to be achieved by implementing annual management activities to protect and maintain habitat health and restoration targets to achieve an ecological lift of “habitat improvement” as required by law (CDPR 2021i). In addition, well-crafted goals and objectives can identify targeted resource conditions while allowing for flexibility to apply innovative techniques to achieve desired conditions. This section describes the goals and objectives developed for Prairie City SVRA.

3.1 WHPP GOALS AS DEFINED BY THE PUBLIC RESOURCE CODE

The 2017 update to California Public Resources Code (PRC) pertaining to off-highway motor vehicle recreation provides the goals for this WHPP (CDPR 2021i). Specifically, PRC §5090.35 (c)

(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 2021i):

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

3.2 WHPP OBJECTIVES

Below is a discussion of the Park’s WHPP objectives, which tier directly from the goals outlined in the PRC. WHPP objectives build upon the existing natural resources program at Prairie City SVRA and have been tailored to fit the specific environmental conditions at the park. Due to the interrelated nature of the natural world and the systems it embodies, these objectives are not delineated along with singular variables as called out in the PRC but are interwoven to reflect the interconnected relationship of ecosystems (Figure 28).

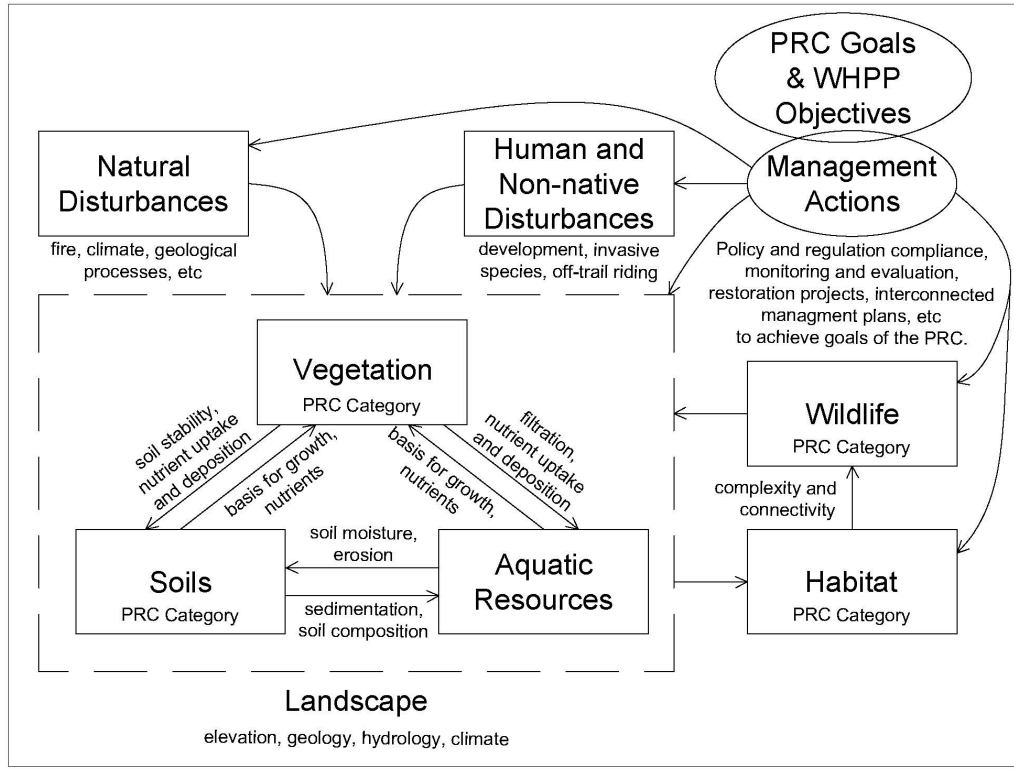


Figure 28. Conceptual Model Demonstrating the Interwoven Nature of Soils, Plants, Wildlife, and Habitat within the Ecosystem and the Reflective Interconnected Nature of the PRC Goals, WHPP Objectives, and Management Actions.

The PRC statutory law of “conservation and long-term protection” is achieved through setting resource objectives that target the protection and maintenance of the extent and condition of the existing soils, plants, wildlife, and habitats within the SVRA. The PRC statutory law of “restoration” is achieved by setting objectives that target improving degraded conditions or provide for re-establishment or increased quantity of soils, plants, wildlife, and habitats within a SVRA. The objectives below allow for the conservation and improvement of the resource categories provided for in the PRC.

The objectives assigned under each goal follow S.M.A.R.T. format principles and inherently conform to the best available science and adaptive management (CDPR 2021i). S.M.A.R.T. refers to objectives that are “specific,” “measurable,” “achievable/attainable,” “realistic,” and “timely.” In addition, the WHPP objectives are consistent with the 2016 GP and EIR. The objectives are based on the natural resource assessment gathered and span the next five years. A summary of the WHPP goals and objectives listed below can be found in Table 1. The table also outlines each goal’s management actions and monitoring program, as described in sections 4 and 5.

3.2.1 Conservation and Long-term Protection Objectives

Resource Category: Vegetation

Objective 1 - Conserve natural vegetation and native California plant communities through 2026.

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

Objective 1 Target 1(O1T1): Maintain 363 acres of vegetation cover within existing riding areas biennially (baseline 363 acres)

O1T2: Conserve 41 acres of cottonwood forests within the Yost/Ehnisz MU by 2026 (baseline 44 total acres of cottonwood forests in Yost/Ehnisz MU)

O1T3: Conserve 165 acres of vegetation cover within the Yost/Ehnisz MU by 2026 (baseline 375 total vegetation cover in Yost/Ehnisz MU)

O1T4: Continue to conserve 6 acres of Oak woodland habitat within Zone 2/3 MU through 2026 (baseline 6 acres)

Baseline acreage was calculated from GIS-based cover assessment and VegCAMP surveying and mapping during the Natural Resource Assessment. Target parameters were chosen to conserve existing baseline data in areas already conserved or areas for future conservation efforts. Yost/Ehnisz MU will plan trail design through the RTMP within designated project footprints (See Appendix 3 for more detail on this project). The rest of the MU outside these project footprints are designated as buffer areas, and the vegetation there will be conserved (165 acres). All the cottonwood forests will be conserved within the project footprints (41 acres). The remaining three acres of cottonwood forests are within an easement outside the Park's control and, therefore, are excluded from the target conservation acreage.

Resource Category: Wildlife

Objective 2 – Conserve avian diversity through 2026.

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

O2T1: Continue to conserve avian diversity through 2026 (baseline 146 species, richness per site =22, diversity = 2.51).

Baseline richness and diversity were calculated from the 2019 avian point count HMS monitoring described in the wildlife inventory section of the Natural Resource Assessment.

Objective 3 – Conserve reptile and amphibian diversity through 2026.

The current inventory is out of date and will need to be updated before monitoring reptile, and amphibian diversity can be planned. A S.M.A.R.T. target will be developed to update the reptile and amphibian inventory and establish a more current baseline.

Objective 4 – Conserve mammal diversity through 2026.

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

O4T1: Continue to conserve large mammal richness and diversity through 2026 (baseline ten species)

Baseline richness was calculated from the wildlife inventory during the Natural Resource Assessment. Large mammals include rabbits, skunks, raccoons, weasels, felines, canines, and deer. Small mammals include rodents, shrews, moles, voles, and bats. The current small mammal inventory is out of date and will need to be updated before monitoring small mammal diversity can be planned. A S.M.A.R.T. target will be developed to update the small mammal inventory and establish a more current baseline.

Resource Category: Habitats

Objective 5 – Conserve the abundance and distribution of special-status species’ habitats and other sensitive habitats through 2026.

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

O5T1: No net loss of VELB potential habitat through 2026 (baseline 248 elderberry shrubs)

O5T2: No net loss of wetlands, including vernal pools, functions, and values through 2026 (baseline 16.3 acres, 228 features).

O5T3: Maintain 90% survivorship of native plantings within restoration areas designated within Zone 2/3 MU and Zone 4 MU through 2026 (baseline 170 plants)

Baseline data was determined during the Natural Resource Assessment. Target parameters of no net loss stem from the guidelines within the 2016 GP and EIR and compliance with state and federal regulatory oversight. The target survivorship can be met within the timeframe, staffing level, and funding availability.

Resource Category: Soils

Objective 6 – Conserve soils by applying the 2020 Soil Conservation Standard through 2026.

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

O6T1: Restore 20 acres of eroded areas within Zone 2/3 MU or Zone 4 MU by 2024 (baseline 171 acres of vegetation).

Baseline acreage was calculated from GIS-based cover assessment and VegCAMP surveying and mapping during the Natural Resource Assessment. Adding vegetation to eroded areas will stabilize soils, filter run-off, provide habitat and foraging sources, and restore the nutrient cycle within the topsoil. Additional soil management objectives will be included in the SCP which describes S.M.A.R.T. objectives and associated baseline and target parameters related to soil management practices within the Park. The SCP will inform the park's restoration planning by identifying areas where excess soil loss is occurring and where unnatural erosion is adversely impacting the park's other resources.

3.2.2 Restoration and Improvement Objectives

Resource Category: Vegetation

Objective 7 – Improve natural vegetation and native California plant communities through 2026.

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

O7T1: Increase the extent and increase the oak population located within Zone 2/3 MU by ten plants by 2025 (baseline 6 acres, 78 plants).

O7T2: Restore 20 acres of vegetation cover within Zone 2/3 MU or Zone 4 MU by 2024 (baseline 171 acres).

Baseline acreage was calculated from GIS-based cover assessment and VegCAMP surveying and mapping during the Natural Resource Assessment. The target restoration numbers are reasonably feasible within the timeframe, staffing level, and funding availability.

Objective 8 - Manage landscapes to reduce invasive plant cover, improve native to invasive plant composition ratios, and control the spread of aggressive non-natives, especially within or bordering special-status species' habitats, through 2026.

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

O8T1: Increase native plant relative species abundance compared to medusahead within Vernal Pool MU through 2026 (baseline 24 native species across all plots: 32 non-native species, 44% average medusahead cover).

O8T2: Improve native plant composition within vernal pool habitat by maintaining no more than 20% cover of invasive plant species within the Vernal Pool MU by 2026 (baseline over 50% cover).

O8T3: Improve native plant composition within restoration areas by maintaining no more than 20% cover of invasive plant species within Zone 2/3 MU and Zone 4 MU by 2026 (baseline over 50% cover).

Abundance baseline data was calculated from the 2020 pre-prescribed burn relevé survey, and percent cover was determined from VegCAMP surveying and mapping during the Natural Resource Assessment. The 20% cover target stemmed from an analysis of past wildfires, prescribed burns in the area, and the resulting level of thatch after the burn.

Resource Category: Wildlife

Objective 9 - Improve migratory and nesting bird population habitat by 2026.

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

O9T1: Increase native plantings by 50 plants within restoration areas designated within Zone 2/3 MU and Zone 4 MU by 2026 (baseline 170 plants)

Baseline data was determined from survivorship and health monitoring of native plantings during the Natural Resource Assessment. The target restoration number is reasonably feasible within the timeframe, staffing level, and funding availability.

Resource Category: Habitats

Objective 10 - Improve environmentally sensitive habitats by 2026.

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

O10T1: Expand the extent of riparian habitat adjacent to Goose Pond by .25 acres by 2026 (baseline 0.9 acres of riparian habitat).

O10T2: Improve average species richness (i.e., number of species) within the Vernal Pool MU grasslands by 2026 (baseline 17 average species richness).

Richness baseline data was calculated from the 2020 pre-prescribed burn relevé survey, and riparian acreage was determined from VegCAMP surveying and mapping during the Natural Resource Assessment.

Resource Category: Soils

Objective 11 - Improve soils by applying the 2020 Soil Conservation Standard through 2026.

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

O11T1: Restore 20 acres of eroded areas within Zone 2/3 MU or Zone 4 MU by 2024 (baseline 171 acres of vegetation).

Baseline acreage was calculated from GIS-based cover assessment and VegCAMP surveying and mapping during the Natural Resource Assessment. Adding vegetation to eroded areas will stabilize soils, filter run-off, provide habitat and foraging sources, and restore the nutrient cycle within the topsoil. Additional soil management objectives will be included in the SCP which describes S.M.A.R.T objectives and associated baseline and target parameters related to soil management practices within the Park. The SCP will inform the park's restoration planning by identifying areas where excess soil loss is occurring and where unnatural erosion is adversely impacting the park's other resources.

Table 1. Summary of Prairie City 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	Vegetation Habitat Soils	Objective 1: Conserve natural vegetation and native California plant communities through 2026.	<p>Prevent unauthorized trail development by identifying unauthorized trails, placing or installation of barriers to prevent access to unauthorized riding areas, and naturalizing unauthorized trails through restoration</p> <p>Carry out Project 1, the Yost/Ehnisz MU RTMP project, to design a new trail system in a currently closed area.</p> <p>Incorporate resource conservation into RTMP planning in Yost/Ehnisz MU</p> <p>Carry out Project 2, the Coyote Gulch Project, to convert existing open riding areas into a trail-only system.</p> <p>Incorporate resource conservation into RTMP planning in Zone 2/3 MU</p> <p>Carry out Project 3, Fence planting area to protect irrigation and plants</p>	<p>VegCAMP surveys every five years</p> <p>GIS-based vegetation cover assessment biennially</p> <p>Ongoing restoration area survivorship and health surveys</p> <p>Special-status plant surveys every five years</p>
Conserve	Wildlife	Objective 2: Continue to conserve avian diversity through 2026.	Conduct required project impact evaluations and monitoring, and implement best management practices to ensure compliance with project permits, management plans, state and federal laws and regulations (Appendix 3)	Annual bird point count surveys
Conserve	Wildlife	Objective 3: Conserve reptile and amphibian diversity through 2026.	<p>Conduct required project impact evaluations and monitoring, and implement best management practices to ensure compliance with project permits, management plans, state and federal laws and regulations (Appendix 3)</p> <p>Protection of reptile and amphibian habitat</p>	Conduct reptile and amphibian surveys by 2023 to update the existing reptile and amphibian inventory. Continue reptile and amphibian surveys every five years.

Goal	Resource Category from PRC 5090.10	S.M.A.R.T. Objectives	Management Actions	Monitoring
Conserve	Wildlife	Objective 4: Conserve mammal diversity through 2026.	<p>Conduct required project impact evaluations and monitoring, and implement best management practices to ensure compliance with project permits, management plans, state and federal laws and regulations (Appendix 3)</p> <p>Protection of mammal habitat and movement corridors</p>	<p>Conduct small mammal surveys by 2023 to update the existing small mammal inventory. Continue small mammal surveys every five years.</p> <p>Trail camera monitoring</p>
Conserve	Habitat Wildlife Vegetation Soils	Objective 5: Conserve the abundance and distribution of special-status species habitats and other sensitive habitats through 2026.	<p>Conduct required project impact evaluations and monitoring, and implement best management practices to ensure compliance with project permits, management plans, state and federal laws and regulations (Appendix 3)</p> <p>Enforce 20-ft exclusion buffer around Sambucus species</p> <p>Exclude riding within wetlands with options for seasonal management</p> <p>Redirect special event routes if impacts may occur</p>	<p>Identify and map all wetlands, including vernal pools, within the Vernal Pool MA MU by 2023</p> <p>Conduct a habitat assessment of aquatic features which have the potential to support federally listed large branchiopods (e.g., <i>Branchinecta lynchi</i> and <i>Lepidurus packardii</i>) within Zone 1 MU by 2023</p> <p>Annual roadside trimming program monitoring</p> <p>Elderberry Inventory every five years</p> <p>Pre/post special event monitoring</p> <p>Ongoing restoration area survivorship and health surveys</p>
Conserve	Soils	Objective 6: Conserve soils by applying the 2020 Soil Conservation Standard through 2026.	Implement SCP	GIS-based vegetation cover assessment biennially

Goal	Resource Category from PRC 5090.10	S.M.A.R.T. Objectives	Management Actions	Monitoring
Improve	Vegetation Habitat Wildlife	Objective 7: Improve natural vegetation and native California plant communities through 2026.	<p>Continue acorn propagation program</p> <p>Expand acorn propagation program</p> <p>Target Zone 2/3 MU or Zone 4 MU in the annual rehab program</p> <p>Carry out Project 4, the Goose Pond Road Stormwater Improvement Project, improve drainage into the Goose Pond sediment basin</p> <p>Carry out Project 2, the Coyote Gulch Project, to convert existing open riding areas into a trail-only system.</p> <p>Identify and rehab redundant trails Anticipate/Implement RTMP planning Zone 2/3 MU Reroute or restore trails within the root zone of oak trees</p> <p>Rehabilitate or restore unauthorized trail development Implement Prescribed Burn Program in partnership with CalFire</p>	<p>Ongoing restoration area survivorship and health surveys</p> <p>GIS-based vegetation cover assessment biennially</p> <p>Pre/post prescribed fire relevé survey VegCAMP surveys every five years</p>
Improve	Vegetation Habitats	Objective 8: Manage landscapes to reduce invasive plant cover, improve native to invasive plant composition	Implement Prescribed Burn Program in partnership with CalFire	Pre/post prescribed fire relevé survey

Goal	Resource Category from PRC 5090.10	S.M.A.R.T. Objectives	Management Actions	Monitoring
		ratios and control the spread of aggressive non-natives, especially within or bordering special-status species' habitats through 2026.	<p>Remove <i>Elymus caput-medusae</i> ("Medusahead") thatch within the Vernal Pool MA MU</p> <p>Annually survey and treat invasive populations bordering the Vernal Pool MA MU to prevent and reduce encroachment</p> <p>Develop an Invasive Plant Management Plan by 2022</p> <p>Annually survey and treat invasive populations within Zone 2/3 MU and Zone 4 MU designated restoration areas to prevent and reduce encroachment</p>	<p>Annual EDRR invasive plant monitoring</p> <p>Widespread Invasive Plant monitoring</p>
Improve	Habitat Wildlife Vegetation	Objective 9: Improve migratory and nesting bird population habitat by 2026.	<p>Continue annual restoration program with a focus on areas or trails with excessive erosion or increasing habitat fragment size</p> <p>Continue and expand plant propagation program</p>	Ongoing restoration area survivorship and health surveys
Improve	Habitat Wildlife Vegetation	Objective 10: Improve environmentally sensitive habitats by 2026.	<p>Carry out Project 4, the Goose Pond Road Stormwater Improvement Project, improve drainage into the Goose Pond sediment basin, and increase riparian vegetation</p> <p>Implement Prescribed Burn Program in partnership with CalFire</p>	<p>VegCAMP surveys every five years</p> <p>Pre/post prescribed fire relevé survey</p>
Improve	Soils	Objective 11: Improve soils by applying the 2020 Soil Conservation Standard through 2026.	Implement SCP	GIS-based vegetation cover assessment biennially

3.3 STATE AND REGIONAL CONSERVATION PLANNING

Prairie City SVRA is owned and operated by the State of California. It is not subject to local government policies or ordinances (CDPR 2016a). However, PRC Section 5090.32(g) requires that WHPPs be developed considering statutorily required state and regional conservation objectives (CDPR 2021i). As a result, the below referenced State and Regional Conservation Objectives were reviewed and incorporated into the development of the Prairie City WHPP objectives (Table 2). This consideration has led to well-defined WHPP objectives that will ensure that the SVRA is managed in a manner compatible with the values expressed by the surrounding community.

Table 2. Summary of State and Regional Plans, their Geographical Relationship to the Park, and whether the WHPP Contributes to Relevant State or Regional Conservation Objectives.

Plan Name	State or Regional Plan	Geographical Overlap with the Park	Contains Relevant Target Resources	Contributes to Conservation Objectives
State Wildlife Action Plan	State	X	X	X
California Water Resilience Portfolio	State	X	N/A	X
California Biodiversity Initiative	State	X	X	X
Safeguarding California Plan	State	X		X
Vernal Pool Recovery Plan	State	X	X	X
California Essential Habitat Connectivity Project	State	X	X	X
Central Valley Region Basin Plan	Regional	X	X	X
Sacramento County General Plan	Regional	X	N/A	X

Plan Name	State or Regional Plan	Geographical Overlap with the Park	Contains Relevant Target Resources	Contributes to Conservation Objectives
Sacramento County Weed Management Area Strategic Plan	Regional	X	X	X
South Sacramento Habitat Conservation Plan	Regional	X	N/A	N/A

State Wildlife Action Plan (SWAP)

This plan, developed by the CDFW in 2015 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. The plan complies with the federal State and Tribal Wildlife Grants Program requirements. 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. The 2022 WHPP supports SWAP goals by maintaining and improving wildlife habitat over time within the SVRA.

The SWAP has divided the state of California into seven provinces and developed regional conservation strategies for each. Prairie City SVRA is located within the Central Valley and Sierra Nevada Province. Prairie City SVRA falls within the Great Valley Ecoregion Conservation Unit, targeting American Southwest Riparian Forest and Woodland and Freshwater Marsh habitats and their associated focal species. This WHPP aligns with the SWAP’s conservation goals by incorporating a long-term goal of riparian and wetland habitat protection and improvement.

California Water Resilience Portfolio

In 2020, state agencies developed the California water resilience portfolio in response to Executive Order N-10-19 to improve California’s capacity to prepare for disruptions, withstand and recover from climate-related shocks, and adapt to the future. The portfolio embraces a broad, diversified approach shaped to provide important tools for local and regional entities to build resilience and encourage collaboration within and across these regions. Four broad approaches are identified: 1) Maintain and diversify water supplies; 2) protect and enhance natural systems; 3) build connections, and 4) be prepared. While most of the document is focused on water resources on the scales of large rivers, there are a few conservation goals that directly align with those in the 2022 WHPP, such as the expansion and protection of wetlands to create habitat and filter runoff.

California Biodiversity Initiative

The goal of the Biodiversity Initiative is to secure the future of California’s biodiversity by integrating biodiversity protection into the state’s environmental and economic goals and efforts. The California Biodiversity Initiative Roadmap outlines long-term steps for achieving the initiative’s goals. The Roadmap identifies the need to develop a baseline understanding of the current status of California’s biodiversity. Additionally, it highlights that management and conservation activities should integrate protection and preservation of biodiversity and that lands and waters should be restored and protected to meet the initiative’s biodiversity goals. The 2022 WHPP supports these goals by seeking to maintain and improve wildlife habitat over time within the SVRA through specific management actions directed by research and monitoring.

2018 Safeguarding California Plan

Developed by the California Natural Resources Agency, the updated 2018 Safeguarding California Plan's purpose is to lay out guidelines for how agencies can incorporate strategies necessary to address climate change into their future planning efforts. The 2018 update included a chapter specific to parks, including the recommendation (PC-5) to incorporate climate change in all California State Park and conservancy planning and decision-making. To meet Recommendation PC-5, the plan identifies a step (PC-5.6) to “prioritize conservation, protection, and restoration of natural resources in climate change adaptation projects and planning to ensure sustainable recreational opportunities for the public.” The WHPP can contribute to this plan by conserving and improving habitat while evaluating whether recreational opportunities are sustainably managed.

One of the primary goals and objectives specific to the 2022 WHPP is to conserve and improve the identified habitats through specific management actions directed by research and monitoring. In addition to conserving and improving habitat, the 2022 WHPP acts to provide Prairie City SVRA management information and recommendations necessary to maintain sustainable recreation opportunities to the public.

Vernal Pool Recovery Plan

This USFWS recovery plan features 33 species of plants and animals that occur exclusively or primarily within a vernal pool ecosystem in California and southern Oregon. The 20 federally listed species include ten endangered plants, five threatened plants, three endangered animals, and two threatened animals. Recovery plans describe actions considered necessary to conserve the species, establish criteria for downlisting or delisting listed species, and estimate time and cost for implementing the recovery measures needed. The over-arching recovery strategy for species in this recovery plan is habitat protection and management. Prairie City SVRA is adjacent to the Mather priority Core area within the Southeastern Sacramento Valley Vernal

Pool Region. The 2022 WHPP objectives align with the vernal pool recovery plan for the long-term conservation and improvement of vernal pool habitats to benefit the whole ecosystem.

California Essential Habitat Connectivity Project

The California Department of Transportation (Caltrans) and CDFW commissioned the California Essential Habitat Connectivity Project in 2010 because a functional network of connected wildlands is essential to the continued support of California's diverse natural communities in the face of human development and climate change. This Essential Habitat Connectivity Report includes a statewide map of Essential Connectivity Areas and an assessment of these areas and the lands they connect. It also describes strategies for maintaining and enhancing functional ecological connectivity through local and regional land-use and management plans. These tools and strategies are provided to assist all agencies and organizations involved in land-use planning, transportation planning, land management, and conservation in California with maintaining a connected California while simultaneously making land-use and infrastructure planning projects more cost-efficient. This 2022 WHPP aligns with the California Essential Habitat Connectivity Project's conservation goals by conserving and improving functional ecological connectivity throughout the park.

Central Valley Basin Plan

The Basin Plan issued by the Central Valley Regional Water Quality Control Board (RWQCB) (2018) sets forth water quality standards for the surface waters and groundwater of the region. Those standards include both designated beneficial uses of the water and the narrative and numeric objectives that must be maintained or attained to protect those uses. Generally, narrative criteria require that water quality not be degraded because of increases in pollutant loads that adversely affect a water body's designated beneficial uses. The basin plan provides allowable limits for water turbidity leaving the site compared to entering the site. The proposed water quality monitoring within this 2022 WHPP implements these limits.

Sacramento County General Plan (SCGP)

On November 9, 2011, the Sacramento County Board of Supervisors adopted an updated General Plan. The planning horizon of the County's previous General Plan was 1990 to 2010; the updated General Plan's planning horizon looks out to 2030. The General Plan is a set of goals, objectives, policies, implementation measures, and maps that form a blueprint for physical development in the unincorporated County. One section of the General Plan focuses on conservation which provides direction regarding the conservation, development, and utilization of natural and cultural resources, including water, forests, soils, rivers, mineral deposits, and aquatic and terrestrial species and their habitats. Although State Parks is not subject to the SCGP, the 2022 WHPP has a long-term habitat protection and improvement goal.

Sacramento County Weed Management Area Strategic Plan

The Sacramento Weed Management Area (WMA) was formed in 2000 by a diverse group of stakeholders, interest groups, and resource agencies to address the challenges of managing invasive weeds in Sacramento County. State Parks is not a member of this group. The WMA prepared a strategic plan in 2010 and compiled background information, focused goals and objectives, and pulled together regional collaborations not addressed in the original plan. The WMA provides a priority weed and watch list and strategies for accomplishing conservation goals within the county. This 2022 WHPP seeks to maintain and improve wildlife habitat over time within Prairie City SVRA through specific invasive species-related management actions directed by research and monitoring.

South Sacramento Habitat Conservation Plan

Sacramento County led local efforts to adopt the South Sacramento Habitat Conservation Plan (SSHCP) in 2018, which enabled development of privately-held land. State Parks was not part of this effort and the HCP does not apply to state property. The SSHCP encompasses a 317,000-acre area in south Sacramento County and streamlines federal and state permitting for development and infrastructure projects while conserving habitat. An interconnected regional preserve system of over 36,000 acres – roughly 1.2 times the total size of San Francisco - will be created over the next 50 years to protect twenty-eight plant and wildlife species and their natural habitats. The SSHCP Area is in the southern portion of Sacramento County. It is divided into two components: inside and outside the Urban Development Area. All proposed urbanization and some preserves will occur inside the Urban Development Area. Most preservation will occur outside the Urban Development Area and help protect agricultural lands and habitats. Prairie City SVRA is split between both, the boundary of the park was not up-to-date when this document was written. This 2022 WHPP has a goal of maintaining and improving wildlife habitat over time within the SVRA through specific management actions directed by research and monitoring.

4 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 to move toward habitat goals and objectives (CDPR 2020i). These actions are informed by the Park's resource objectives, success criteria, and monitoring results (Table 1). In addition, these management actions are consistent with goals from the GP and EIR (CDPR 2016a). For more detail on all the management actions described in the following Table 3 and for additional reasonably feasible actions not listed here, see Section 11 Appendix 3.

Table 3. 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)	Additional Information
On-Going Natural Resource and Maintenance Activities	Prevent authorized trail development by identifying unauthorized trails, placing or installation of barriers to prevent access to unauthorized riding areas, and naturalizing unauthorized trails through restoration	1,2,3,4,7,8,9,10	Through 2026	Annual	Zone 1, Zone 2/3, Zone 4 MU	N/A
On-Going Natural Resource and Maintenance Activities	Remove invasive plant species using mechanical removal, chemical treatments, and/or prescribed burning	1,2,3,4,7,8,9,10	Through 2026	Annual, Summer, Fall	Zone 2/3, Zone 4, and Vernal Pool MUs	N/A

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)	Additional Information
On-Going Natural Resource and Maintenance Activities	Continue annual restoration and rehabilitation program	1,2,3,4,7,8,9,10	Through 2026	Annual, Fall	Zone 2/3 and Zone 4 MU	The focus will be on areas or trails with excessive erosion or increasing habitat fragment size
On-Going Natural Resource and Maintenance Activities	Continue and expand plant propagation program	1,2,3,4,7,8,9,10	Through 2026	Annual, Spring, Fall	Zone 2/3 and Zone 4	N/A
On-Going Natural Resource and Maintenance Activities	Work with Interpretation staff to increase visitor's knowledge and understanding of natural resource-related concepts and projects	1,2,3,4,7,8,9,10	Through 2026	Continuous	Parkwide	N/A

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)	Additional Information
On-Going Natural Resource and Maintenance Activities	Protection of wildlife and their habitat	1 - 10	Through 2026	Continuous	Parkwide	N/A
One-Time Landscape Conservation and Improvement Projects	Carry out Project 1, the Yost/Ehnisz MU RTMP project, to design a new trail system in a currently closed area.	1, 5, 7, and 10	2026		Yost/ Ehnisz MU	N/A
One-Time Landscape Conservation and Improvement Projects	Carry out Project 2, the Coyote Gulch Project, to convert existing open riding areas into a trail-only system.	1, 5, 7, and 10	2023	Spring/Fall	Zone 2/3 MU	N/A

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)	Additional Information
One-Time Landscape Conservation and Improvement Projects	Carry out Project 3, Fence planting area to protect irrigation and plants	1, 5, 7, and 10	2022	Spring	Zone 4 MU	N/A
One-Time Landscape Conservation and Improvement Projects	Carry out Project 4, the Goose Pond Road Stormwater Improvement Project, improve drainage into the Goose Pond sediment basin, and increase riparian vegetation	1, 5, 7, and 10	2022	Summer/Fall	Zone 2/3 MU	N/A
One-Time Landscape Conservation and Improvement Projects	Exclude riding within wetlands with options for seasonal management	1, 5, 7, and 10	2023	Summer	Zone 1 and Zone 2/3 MU	N/A

Management Action Category	Management Action	Associated WHPP Objective	Year	Timing	Location (Management Unit)	Additional Information
Policy and Regulation Compliance	Develop SCP by 2022	2, 3, 4, 5, 6, and 11	2022	N/A	N/A	N/A
Policy and Regulation Compliance	Implement SCP	2, 3, 4, 5, 6, and 11	Through 2026	Annual	Park wide	N/A
Policy and Regulation Compliance	Continue pre- and post-special event monitoring	2, 3, 4, 5, 6, and 11	Through 2026	Annual	Zone 1, Zone 2/3, Zone 4 MU	N/A
Policy and Regulation Compliance	Develop an Invasive Plant Management (IPM) plan by 2022	8	2022	N/A	N/A	N/A

5 MONITORING PROGRAM

Monitoring programs provide a periodic evaluation of the condition of resources and inform adaptive management within the Park. The Natural Resource Assessment section is the initial assessment within a monitoring program. The discussion below includes current and future planned monitoring at Prairie City SVRA. Performance indicators demonstrate progress and achievements of the objectives outlined in Section 3 and evaluate the effects of management actions outlined in Section 4 and summarized in Table 1 and Table 4. Details on the monitoring methodology can be found in Section 12 Appendix 4.

Table 4. A summary of monitoring activities at Prairie City SVRA

PRC Category	Monitoring Activity	Frequency	Due	Objectives being Monitored	Protocol Used
Vegetation	GIS-based Vegetation Cover Assessment	Every other year	2022	1,7	Prairie City SVRA GIS-Based NDVI Monitoring
Vegetation Habitat	VegCAMP Surveys	Every 5 Years	2026	1,7,10	CDFW VegCAMP
Vegetation	Ongoing Restoration Area Survivorship and Health Monitoring	Annual	2022	5,7,9	Prairie City SVRA Restoration Planting Health Monitoring
Vegetation	Special-Status Plant Surveys	Every 5 Years	2023	1	<i>CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities</i>
Vegetation Habitat	Pre/post Prescribed Burn Relevé Survey	Annual	2022	7, 8, 10	CNPS relevé protocol

PRC Category	Monitoring Activity	Frequency	Due	Objectives being Monitored	Protocol Used
Vegetation	EDRR Invasive Plant Monitoring	Annual	2021	8	CDPR EDRR Handbook
Vegetation	Widespread Invasive Plant Monitoring	Every other year	2023	8	To be determined
Habitat	Wetland Mapping in Vernal Pool MU	Every five years	2023	5	<i>USFWS Data Collection Requirements and Procedures for Mapping Wetland, Deepwater, and Related Habitats of the United States</i>
Habitat	Large Branchiopod Habitat Assessment in Zone 1	Every five years	2023	5	<i>USFWS Survey Guidelines for the Listed Large Branchiopods</i>
Habitat	Annual Roadside Trimming Program Monitoring	Annual	2022	5	USFWS VELB Framework 2017
Habitat	Elderberry Inventory	Every five years	2025	1,5	USFWS VELB Framework 2017
Habitat	Pre/Post-Special Event Monitoring	As needed	N/A	5	Prairie City SVRA Special Event Monitoring
Wildlife	Bird Monitoring	Annual	2022	2	Prairie City SVRA and IBP ARU Monitoring

PRC Category	Monitoring Activity	Frequency	Due	Objectives being Monitored	Protocol Used
Wildlife	Reptile and Amphibian Monitoring	Every 5 Years	2023	3	To be determined
Wildlife	Small Mammal Monitoring	Every 5 Years	2023	4	To be determined
Wildlife	Trail Camera Monitoring	Annual	2022	4	Prairie City SVRA Camera Monitoring
Soils	GIS-based Vegetation Cover Assessment	Every other year	2022	6,11	Prairie City SVRA GIS-Based NDVI Monitoring

5.1 MONITORING RELATED TO VEGETATION COMMUNITIES AND COVERAGE

Below is a discussion of the monitoring activities, management actions, and target parameters that determine the success of Objective 1 and Objective 7 related to conserving and improving vegetation with the park. Results of monitoring and potential adaptive management decisions will be included in the Annual Report.

GIS-based Vegetation Cover Assessment

This monitoring measures acres of vegetation cover within the park using the NDVI tool on ArcMap for Desktop by analyzing aerial imagery flown every two years (See Section 12 Appendix 4 for methodology). Baseline acreage was determined using the 2020 analysis discussed in Section 2.3.3. Adaptive management will also be applied to this monitoring methodology to improve the analysis each time it is completed. Multiple S.M.A.R.T. objectives and management actions can be measured for success using this monitoring.

O1T1: Continue to conserve 363 acres of vegetation cover within existing riding areas biennially (baseline 363 acres, Figure 29).

The Park met the objective if the measurement was greater than or equal to the baseline.

If the acre measurement is less than baseline, a cover change analysis will be completed to look for new unauthorized trail creation or widening or possible natural disturbances like drought or fire. This

change may trigger new management actions such as closing the unauthorized trail, installing signage, and completing the restoration.

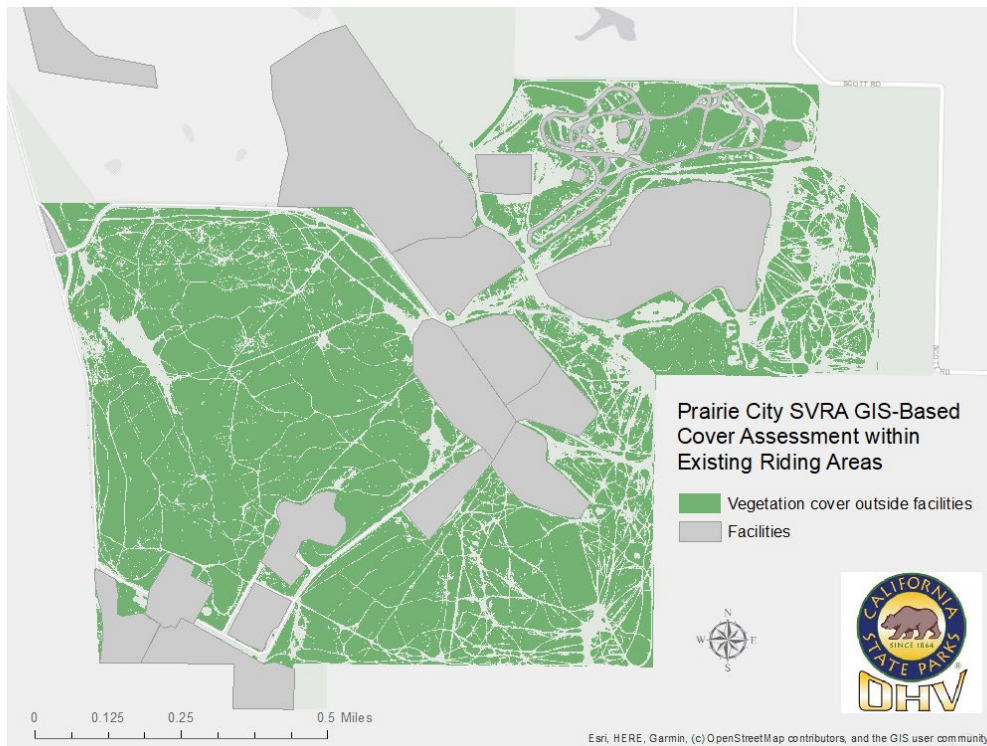


Figure 29. Vegetation Cover within Existing Riding Areas based on 2020 Aerial Imagery.

O1T3: Conserve 165 acres of vegetation cover within the Yost/Ehnisz MU by 2026 (baseline 375 total vegetation cover in Yost/Ehnisz MU). This objective should be met by completing planning for the Yost/Ehnisz MU RTMP project discussed in Appendix 3. The project planning will include a buffer area that excludes OHV recreation and conserves the vegetation communities within (Figure 30).

The Park met the objective if the measurement was greater than or equal to the baseline.

If the acre measurement is less than baseline, a cover change analysis will be completed to look for new unauthorized trail creation or widening or possible natural disturbances like drought or fire. This change may trigger new management actions such as closing the unauthorized trail, installing signage, and completing the restoration.

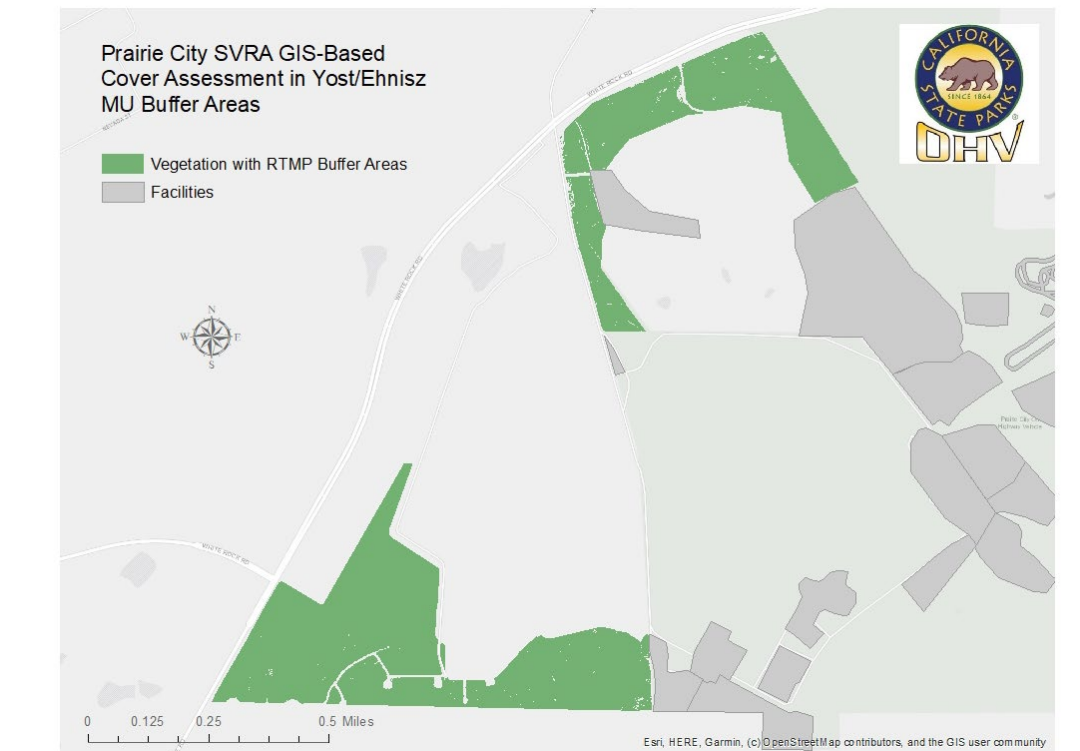


Figure 30. Vegetation Cover within Resource Conservation Buffer Areas in Yost/Ehnisz MU based on 2020 Aerial Imagery.

O7T2: Restore 20 acres of vegetation cover with Zone 2/3 MU or Zone 4 MU by 2024 (baseline 171 acres, Figure 31). This objective should be met by completing the Coyote Gulch project discussed in Appendix 3. As with previous projects, a pre/post vegetation cover change analysis will be completed using the most recent aerial imagery from before and after project completion and when vegetation is established.

The Park met the objective if the Coyote Gulch project restores at least 20 acres of vegetation based on a vegetation cover change analysis.

If the Coyote Gulch project does not restore at least 20 acres, the Park can restore additional areas within Zone 2/3 MU that may contribute to erosion or water quality issues.

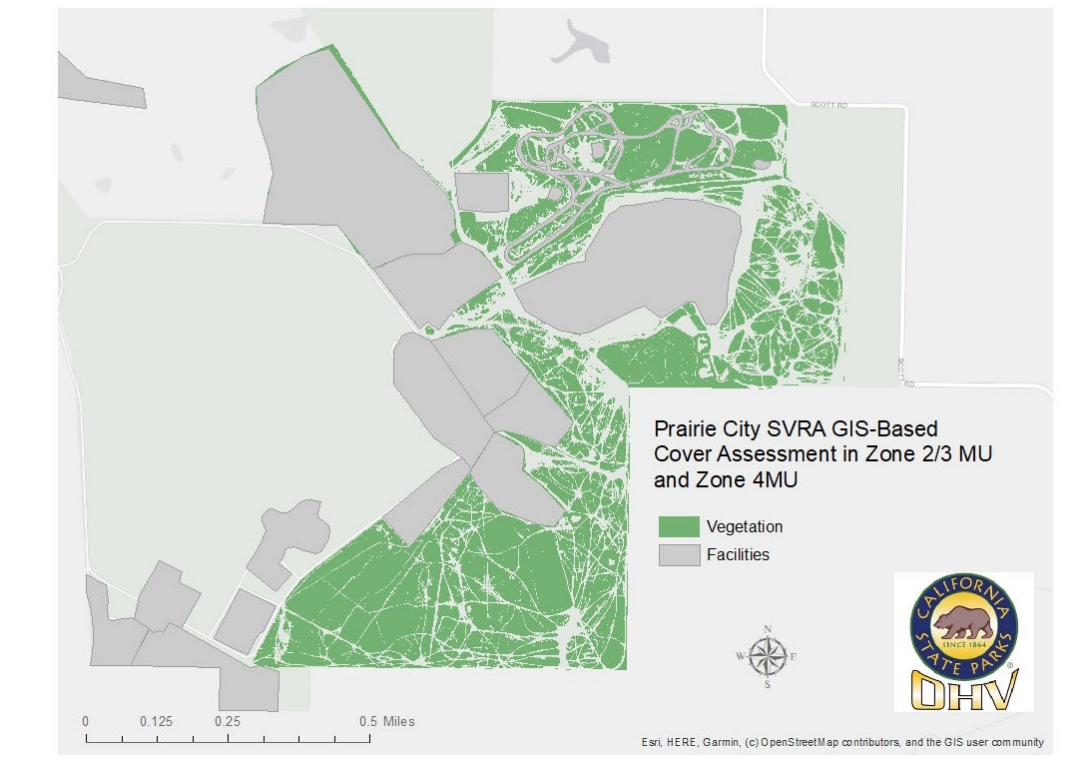


Figure 31. Vegetation Cover in Zone 2/3 and Zone 4 Mus based on 2020 Aerial Imagery.

Management Actions related to one-time Conservation and Improvement Projects: This analysis can also be used to monitor the progress and success of the projects listed in the Management Actions sections through pre-and post-project vegetation cover assessments. The most recent aerial imagery will be used before and after the project. Figure 32 below illustrates the analysis from the Oak Hill Trail Project completed in 2017 (CDPR 2021e).



Figure 32. Example Results of Project Level Vegetation GIS-based Vegetation Cover Analysis

Management Actions for preventing, restoring, or rehabilitating unauthorized trail development: The analysis can be used to detect areas of unauthorized trail development through the gain and loss biennial comparison portion of the analysis.

VegCAMP Surveys

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 4 for methodology). Baseline presence and acreage were determined using the 2021 survey discussed in Section 2.3.3. 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, restoration, monitoring needs, invasive species management, and other management needs and goals. Subsequent VegCAMP surveys will also help resources managers assess the effectiveness of management techniques, including restoration and invasive plant species treatments, and whether WHPP goals and objectives regarding the management of plant communities have been met. Multiple S.M.A.R.T. objects can be measured for success using this monitoring. Results of monitoring and potential adaptive management decisions will be included in the Annual Report.

O1T2: Conserve 41 acres of cottonwood forests within the Yost/Ehnisz MU by 2026 (baseline 44 total acres of cottonwood forests in Yost/Ehnisz MU). This objective should be met as part of planning for

the Yost/Ehnisz MU RTMP project discussed in Appendix 3. Part of the project planning will include avoiding impacts to cottonwood trees and other sensitive habitats.

The Park met the objective if the acreage after monitoring is greater than or equal to the baseline acreage.

If the acreage after monitoring is less than the baseline, it may trigger new management actions such as conserving more cottonwood areas within the Yost/Ehnisz MU.

O1T4: Continue to conserve 6 acres of oak woodland habitat within Zone 2/3 MU through 2026 (baseline 6 acres). This objective should be met by completing the Coyote Gulch project discussed in Appendix 3. The project planning will include excluding oak woodlands from OHV recreation within the project boundary.

The Park met the objective if the acreage after monitoring is greater than the baseline acreage.

If the acreage after monitoring is less than or equal to the baseline, it may trigger management actions like planting additional oaks within the project area.

Ongoing Restoration Area Survivorship and Health Monitoring

Survivorship monitoring focuses primarily on individual trees and shrubs that have been planted by natural resource staff and volunteers, following the methodology in Section 12 Appendix 4. Species, abundance, qualitative health data, diameter at breast height (DBH), and water frequency are all attributes that can be collected and monitored annually. GIS-based cover assessment or VegCAMP can be paired with this analysis to measure acreage.

O7T1: Increase the extent and increase the oak population located within Zone 2/3 MU by 2025 (baseline 6 acres, 78 oaks)

The Park met the objective if the acreage and population size were greater than the baseline.

If the acreage and population size are less than or equal to the baseline, it may trigger management actions like planting additional oaks within Zone 2/3 MU.

Special-Status Plant Surveys

Surveys will be conducted park-wide every five years following the 2018 CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018).

5.2 MONITORING RELATED TO INVASIVE SPECIES

Below is a discussion of the monitoring activities, management actions, and target parameters that determine the success of Objective 8 related to monitoring and treating invasive plant species and improving vegetation communities with the Park. Results of monitoring and potential adaptive management decisions will be included in the Annual Report.

Pre/post Prescribed Burn Relevé Survey

This monitoring measures total vegetative percent cover, including live medusahead cover and thatch cover and depth, cover for other major species, and presence of all species occurring in the plot. Baseline data were collected during the 2020 survey by a State Park's Botanist, as discussed in Section 2.3.3 (See Section 12 Appendix 4 for methodology).

O8T1: Increase native plant relative species abundance compared to medusahead within the Vernal Pool MA MU through 2026 (baseline 24 native species across all plots: 32 non-native species, 44% average medusahead cover).

The objective has been met if the native species relative abundance increases above baseline after medusahead removal.

If the native species' relative abundance is less than or equal to baseline after medusahead removal, the objective has not been met, and additional thatch or medusahead cover removal will be required.

O8T2: Improve native plant composition within vernal pool habitat by maintaining no more than 20% cover of invasive plant species within the Vernal Pool MU by 2026 (baseline over 50% cover).

The objective has been met if invasive plant cover is less than or equal to 20% after prescribed burns within the Vernal Pool MU by 2026.

If invasive plant cover is greater than 20% after prescribed burns within the Vernal Pool MU by 2026, the objective has not been met. Additional management actions will be required to reduce invasive plant cover in the future.

EDRR Invasive Plant Monitoring (Future)

This monitoring determines the presence, location, and extent of target non-native plant species within designated areas of the Park using a protocol design based on the CDPR EDRR Handbook for Invasive Species Management (CDPR 2020b) (See Section 12 Appendix 4 for methodology). More detail will be gathered during the initial EDRR monitoring and generate the new baseline for the next year's monitoring.

O8T2: Improve native plant composition within vernal pool habitat by maintaining no more than 20% cover of invasive plant species within the Vernal Pool MU by 2026 (baseline over 50% cover).

Any amount of surveying and treatment of invasive species along the border of the vernal pool area will prevent small populations from spreading and contributing significantly to invasive percent cover.

If no surveys are completed, the Park has failed the objective, and the reason why will be stated in the Annual Report.

O8T3: Improve native plant composition within restoration areas by maintaining no more than 20% cover of invasive plant species within Zone 2/3 MU and Zone 4 MU by 2026 (baseline over 50% cover).

Any amount of surveying and treatment of invasive species along the border of the vernal pool area will prevent small populations from spreading and contributing significantly to invasive percent cover.

If no surveys are completed, the Park failed the objective, and the reason why will be stated in the Annual Report.

Widespread Invasive Plant Monitoring (Future)

This monitoring will determine the presence, location, and extent of widespread invasive plant species within the Park. This monitoring will help determine the effectiveness of invasive plant treatments and guide adaptive management strategies. Baseline quantitative data for the exotic cover was estimated during the VegCAMP analysis in 2021. An Invasive Plant Management Plan will be developed for the Park by 2022, further explaining the monitoring protocol.

Objective 8 Management Action: Remove medusahead thatch within the Vernal Pool MA MU (baseline 41% average thatch cover). Thatching can be removed through prescribed burns or other mechanical treatment determined by widespread invasive plant monitoring.

If thatch is removed through treatment below the baseline cover, the management action was successful.

If thatch is not removed below baseline cover, the management action was unsuccessful, and additional treatment may be needed the following year.

5.3 MONITORING RELATED TO SPECIAL-STATUS SPECIES' HABITATS

Below is a discussion of the monitoring activities, management actions, and target parameters that determine the success of Objective 5, 9, and 10 related to conserving and improving special-status species' habitats and non-listed species' habitats with the Park. Results of monitoring and potential adaptive management decisions will be included in the Annual Report. Observations of special-status species will be reported to the CNDDDB.

VegCAMP Surveys

This monitoring measures presence and extent (in acres) of specific vegetation community cover within the park using the VegCAMP surveying, and mapping as described above.

O10T1: Expand the extent of riparian habitat adjacent to Goose Pond by .25 acres by 2026 (baseline .9 acres of riparian habitat Figure 33). This objective should be met by completing the Goose Pond Stormwater Improvement Project discussed in Appendix 3. Part of the project will include fencing off an existing wetland area exposed to unauthorized riding.

The Park met the objective if the riparian area is at least 1.15 acres after the project.

If the riparian area is less than 1.15 acres after the project, it may trigger management actions such as planting additional riparian vegetation within the fenced area.

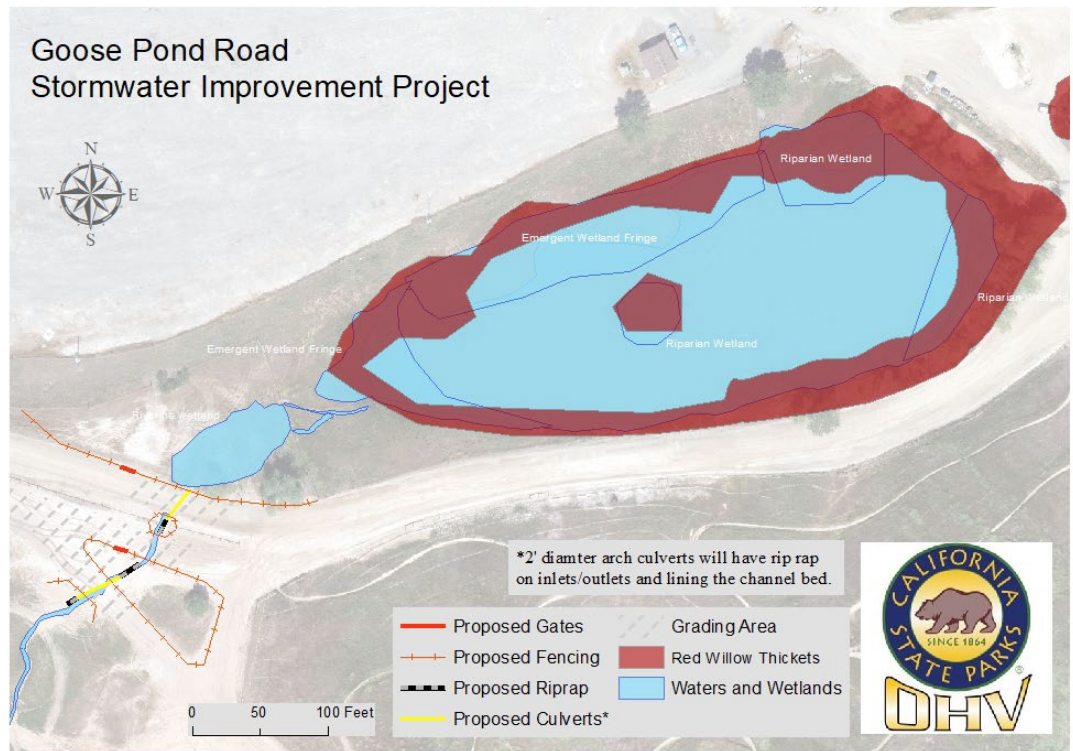


Figure 33. Existing Riparian Vegetation around Goose Pond.

Pre/Post Prescribed Burn Relevé Survey

This monitoring measures total vegetative percent cover, including live medusahead cover and thatch cover and depth, cover for other major species, and presence of all species occurring in the plot. Baseline data were collected during the 2020 survey by State Park Botanist Leah Gardner, as discussed in Section 2.3.3 (See Section 12 Appendix 4 for methodology).

O10T2: Improve average species richness (i.e., number of species) within the Vernal Pool MU grasslands by 2026 (baseline 17 average species richness).

If species richness is greater than baseline, the Park met the objective.

If species richness is less than or equal to baseline, it may trigger new management actions such as additional prescribed burns or other forms of invasive species' management. Additionally, native grasses and forbs may be planted.

Annual Roadside Trimming Program Monitoring

This monitoring assesses the elderberries that grow within park roads corridors and may be in danger of damage from vehicles during the larval stage and flight season of VELB or may cause a safety concern due to limited visibility. Currently, 62 of 248 elderberry plants grow near park roads. Every winter, park staff conduct surveys and trimming according to the protocol in Section 12 Appendix 4, the 2017 USFWS VELB Framework, and informal consultation with USFWS (USFWS 2017). Trimming does not remove any habitat for VELB.

O5T1: Provide no net loss of VELB potential habitat through 2026 (baseline 248 elderberry shrubs). By completing trimming and special event monitoring (detailed below), and CEQA compliance, there should be no net loss of VELB potential habitat.

By completing the monitoring and evaluations mentioned above and reporting any changes to elderberries within the Annual Report, there should be no net loss of VELB habitat, which would meet our objective.

Any net loss of VELB habitat will result in failure of the objective and may result in management actions such as planting additional elderberries.

Elderberry Inventory

Conduct a park-wide survey for elderberries every five years in the spring following the protocol in Appendix 4 to conserve potential VELB habitat.

Pre/Post Special Event Monitoring

Part of the special event permit requires permittees to inform resource staff of the special event routes and/or stations ahead of the event so monitoring can be completed to avoid impacts to natural and cultural resources. Monitoring will be repeated after the event, and any damage will be noted. The permittee might require mitigation if any damage occurs.

O5T2: Attain no net loss of wetlands, including vernal pools, functions, and values through 2026 (baseline 16.3 acres, 228 features). There should be no net loss of wetlands by completing special event monitoring and CEQA compliance.

By completing the monitoring and evaluations mentioned above, there should be no net loss of wetlands which would meet our objective.

Any net loss of wetlands will result in failure of the objective and may result in management actions such as mitigation or restoration.

Wetland Mapping in the Vernal Pool MU (Future)

To ensure an accurate baseline of wetland features for Objective 5 Target 2, wetland locations must be reassessed in the Vernal Pool MU following a modified version of “Data Collection Requirements and procedures for Mapping Wetland, Deepwater, and Related Habitats of the US” (USFWS 2020) in Section 12 Appendix 4. Currently, only location and geometry information are needed, and a full delineation may be completed in the future to identify different types of wetlands within the Vernal Pool MU.

Large Branchiopod Habitat Assessment in Zone 1 (Future)

A consultant will be contracted to conduct this monitoring with a plan to conduct a list large branchiopod survey occupancy survey in the future based on the identified habitat. A biologist with proper permits will follow the standardized guidelines for listed large branchiopods. The report for this assessment will be included in the Annual Report for the year following the survey.

Ongoing Restoration Area Survivorship And Health Monitoring

Survivorship monitoring focuses primarily on individual trees and shrubs that have been planted by natural resource staff and volunteers, following the methodology in Section 12 Appendix 4. Species, abundance, qualitative health data, DBH, and water frequency are all attributes collected and monitored annually. GIS-based cover assessment or VegCAMP can be paired with this analysis to measure acreage.

O5T3: Maintain annual 90% survivorship of native plantings within restoration areas designated within Zone 2/3 MU and Zone 4 MU through 2026 (baseline 170 plants)

The objective has been met if at least 153 plants survive into 2022.

If less than 153 plants survive into 2022, additional plantings will be required with a further investigation as to why the original plantings perished to prevent the problem from happening in the future.

O9T1: Increase native plantings by 50 plants within restoration areas designated within Zone 2/3 MU and Zone 4 MU through 2024 (baseline 170 plants)

The objective will be met if at least 50 plants are planted within Zone 2/3 MU and Zone 4 MU by 2024.

If less than 50 plants are planted, it will trigger additional planting requirements the following year.

5.4 MONITORING RELATED TO WILDLIFE

Below is a discussion of the monitoring activities, management actions, and target parameters that determine the success of Objective 2, 3, and 4 related to conserving and improving wildlife populations with the park. Results of monitoring and potential adaptive management decisions will be included in the Annual Report. Observations of special-status species will be reported to the CNDDB.

Bird Monitoring

This monitoring uses ARUs and in-person bird point count surveys to measure bird species richness and diversity within the park according to the protocol outlined in Section 12 Appendix 4. This methodology is still being developed and may change to improve the accuracy of data collection methods. Changes will be reported in annual monitoring reports. The baseline diversity and richness are from the 2019 survey year when diversity was last calculated (CDPR 2021f).

O2T1: Continue to conserve avian diversity through 2026 (baseline 146 species, richness= 22, diversity = 2.51).

The objective has been met if the measure of diversity is greater than or equal to 2.51.

The objective has not been met if the measure of diversity is less than 2.51. It will trigger additional management actions such as improving the methodology, comparing Prairie City data with local trends, or increasing habitat complexity.

Reptile and Amphibian Monitoring

After the inventory has been updated, a more robust diversity study can be designed and implemented on a five-year schedule. A S.M.A.R.T. target will be developed to update the reptile and amphibian inventory and establish a more current baseline.

Small Mammal Monitoring

After the inventory has been updated, a more robust diversity study can be designed and implemented on a five-year schedule. A S.M.A.R.T. target will be developed to update the small mammal inventory and establish a more current baseline.

Large Mammal Monitoring

Continue monitoring large mammal richness and diversity using annual trail camera monitoring outlined in Appendix 4.

O4T1: Continue to conserve large mammal richness and diversity through 2026 (baseline ten species)

The objective has been met if the measured richness is greater than or equal to baseline.

If the measured richness is less than baseline, management actions may be triggered, such as installing or creating additional wildlife-friendly fencing or creating more movement corridors by planting additional trees and shrubs along park boundaries.

5.5 MONITORING RELATED TO SOILS

Below is a discussion of the monitoring activities, management actions, and target parameters that determine the success of Objective 6 and Objective 11 related to conserving and improving soils with the park.

GIS-based Vegetation Cover Assessment

This monitoring measures acres of vegetation cover within the park using the NDVI tool on ArcMap for Desktop by analyzing aerial imagery flown every two years (See Section 12 Appendix 4 for methodology). Baseline acreage was determined using the 2020 analysis discussed in Section 2.3.3. Adaptive management will also be applied to this monitoring methodology to improve the analysis each time it is completed. Multiple S.M.A.R.T. objectives and management actions can be measured for success using this monitoring.

O6T1 and O11T1: Restore 20 acres eroded areas with Zone 2/3 MU or Zone 4 MU by 2024 (baseline 171 acres of vegetation). This objective should be met by completing the Coyote Gulch project discussed in Appendix 3. As with previous projects, a pre/post vegetation cover change analysis will be completed using the most recent aerial imagery from before and after project completion and when vegetation is established.

The Park met the objective if the Coyote Gulch project restores at least 20 acres of vegetation based on a vegetation cover change analysis.

If the Coyote Gulch project does not restore at least 20 acres, the Park can restore additional areas within Zone 2/3 MU that may contribute to erosion or water quality issues.

Additional soil assessments will be conducted annually as part of the SVRA's SCP soil compliance monitoring. The programs will include bare soil assessment, trail evaluations, stormwater turbidity monitoring, and best management practice (BMP) features monitoring. The baseline and target parameters for monitoring and methodologies will be documented within the SCP.

6 EVALUATE AND ADAPT

After evaluating the year's management actions and monitoring programs, the Park may need to respond by adjusting the next year's WHPP program as part of the adaptive management process. This section outlines the adaptive management decision process and chain of command and the required Annual Report to document those decisions and the full natural resource program of the previous year.

6.1 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.

6.1.1 Standard Chain of Command

The standard chain of command for decisions and approval at Prairie City SVRA is depicted in Figure 34 based on the Department Operations Manual (DOM) Section 202. With resource-related issues, including decisions involving the WHPP, the District Natural Resource Program Manager and the Natural Resources Division may have an increased role in the decision-making process dependent upon the scope of the issue.

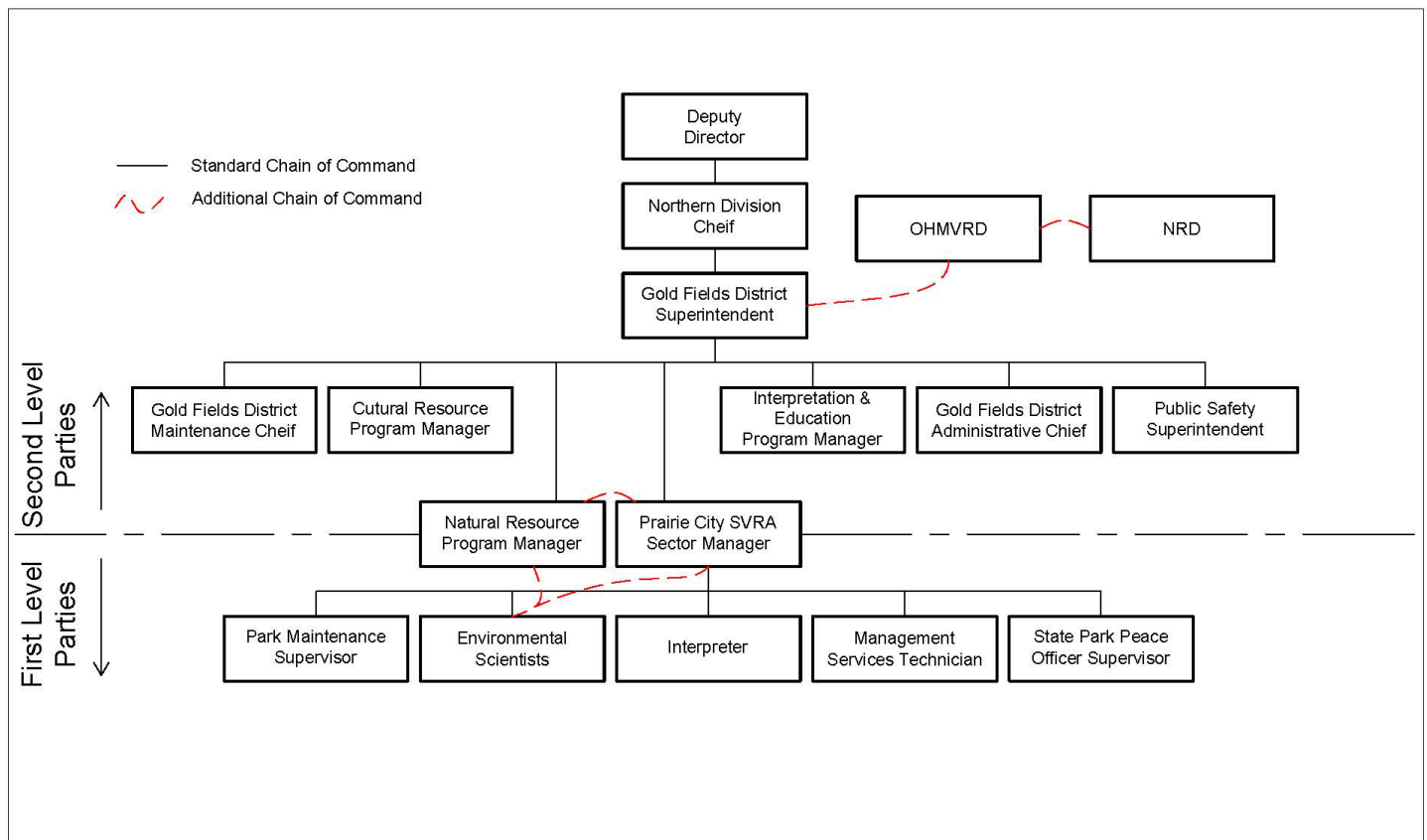


Figure 34. Chart Representing the Standard Chain of Command and Alternative Communication Pathways.

In the standard chain of command, Environmental Scientists would notify the Prairie City SVRA Sector Manager of any situations which trigger management action. The Sector Manager would notify the Natural Resource Manager and Gold Fields District Superintendent if required. The Gold Fields District Superintendent would notify their chain of command, and OHMVRD would be responsible for involving NRD. Each chain of command level within uses their judgment on when to elevate an issue. Involvement may vary from a simple notification of management action to inclusion in a more involved decision-making process. Results of any decision will travel back down through the chain of command for the field staff to implement appropriately.

6.1.2 First-Level Response Chain of Command and Approval Process

Most situations can be solved at the park level with or without the additional involvement of the Natural Resource Manager. These first-level management action decisions might involve all the first-level parties depicted in Figure 34.

Environmental Scientists are approved to take certain management actions already approved through the WHPP process. They may only require notification to the Sector Management and/or the District Natural Resource Program Manager. Planting native plants within existing restoration or protected areas and other ongoing natural resource activities would fall under this level. Potential management actions not addressed within this WHPP will be discussed with the Sector Manager and the District Natural Resource Program Manager. They would determine whether or not other parties in the chain of command need to be involved.

Some actions may require input from other programs at the park, such as maintenance, law enforcement, or interpretation. These actions would also include the Sector Manager. An example of this type of management action is a small-scale restoration project to rehabilitate unauthorized trails requiring maintenance of fence building, safety input from law enforcement, and public notification through interpretation. Many ongoing natural resource and maintenance activities fall under this level. Projects requiring additional CEQA, starting with the CDPR PEF or permits, would trigger the involvement of the Natural Resource Program Manager and potentially other levels within the chain of command.

6.1.3 Second-Level Response Chain of Command and Approval Process

Some management actions may require approval processes at the District level or higher due to the level of complexity of the issue, potential impact to other programs, funding needs, and availability, or additional actions outside the scope of the current WHPP. In addition, many of the alternative pathways to addressing management actions triggered by adaptive management may also engage other divisions – including the OHMVRD, NRD, or the Northern Service Center. These management actions would require a second-level response chain of command notification or approval, as depicted in Figure 34. The Sector Manager and the District Natural Resource Program Manager are responsible for elevating a management action decision to the second-level chain of command.

Large scale projects, such as developing the Yost and Ehnisz parcels, go through a District-wide project planning process. It includes a review from all core programs and results in agreed-upon avoidance and minimization measures incorporated into the project to reduce impacts to natural resources. This standard process, including the PEF as the initial step in the CEQA process, will ensure appropriate management actions are taken before, during, and after a project to conserve and improve wildlife and habitat potentially impacted by the project.

Additional expertise and knowledge may be needed from the District, OHMVRD, or NRD to aid park staff in implementing or developing management actions. Developing and interpreting policy or monitoring methods for programs such as EDRR or prescribed burns are examples of actions that may need additional outside sources of expertise.

The examples provided above are included to characterize the chain of command pathway related to the WHPP. Changes in staff, management, or the chain of command will be updated within the WHPP promptly. Additional changes requiring high levels of notification and decision-making will also be documented in annual reports.

6.2 ANNUAL WHPP REPORT

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

The Report, at minimum, will include the following:

- The resources, goals, and objectives for the prior year
- An analysis and review of the prior year's monitoring data results.
- The park's management triggers from the prior year.
- All management action decisions 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.

Report Review Process

WHPP Annual Reports are to be reviewed at many different levels within State Parks' Chain of Command. These levels include Park, District, Division, and Department. After iterative review at the Park 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 Park's 2022 WHPP are being met.

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.

7 CONSTRAINTS

Several factors may limit staff's ability to accomplish the goals and objectives laid out in the WHPP. The Park has little influence over surrounding land use, such as development within existing easements and the extensive urban development approved by the Cities of Folsom and Rancho Cordova, and the related impact on soil, vegetation, wildlife, and habitats; for example, reducing wildlife corridors connecting to the park or surrounding raptor foraging habitat. The variability in annual weather cycles may restrict the ability to complete certain goals that depend on specific temporal and climatic conditions. Unpredictable events, such

as wildfire may also limit the ability to accomplish goals and objectives in the WHPP. The Park has had to adjust and reprioritize projects in response to past wildfires. In addition, wildfires in other areas of the state may pull resources from projects scheduled within the Park, such as prescribed burns. Aging infrastructure within the Park and potentially costly repairs are just one potential factor that could lead to financial constraints. Preparation for the annual Hangtown Motocross Classic draws substantial resources, including mowing roughly 50 acres of the Park for parking and fuel reduction purposes. Project priorities and funding availability may delay accomplishing projects identified in the WHPP. The Annual Report will discuss any constraints that inhibit specific goals and objects in the estimated timeframe.

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APPENDICES

9 APPENDIX 1: WILDLIFE AND PLANT INVENTORY

Table 5. Wildlife Inventory. List generated based on nine 7.5' USGS Quads surrounding the SVRA footprint - Citrus Heights, Folsom, Folsom SE, Clarksville, Buffalo Creek, Carmichael, Elk Grove, Sloughouse, and Carbondale.

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Ambystoma californiense</i>	California tiger salamander	Amphibians	FT	ST	G2G3	S2S3	Central California DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	low	No	There is suitable habitat present within seasonal wetlands and vernal pools; however, the park is outside of the known range for this species.
<i>Anaxyrus boreas halophilus</i>	California toad	Amphibians	None	None	None	None	Inhabits a variety of habitats, including marshes, springs, creeks, small lakes, meadows, woodlands, forests, and desert riparian areas.	High	Yes	Observed in 2019 as an incidental sighting
<i>Pseudacris sierra</i>	Pacific Chorus Frog	Amphibians	None	None	None	None	This species utilizes a wide variety of habitats, often far from water outside of the breeding season, including forest, woodland, chaparral, grassland, pastures, desert streams and oases, underground caves, and urban areas.	High	Yes	Observed regularly throughout the park as an incidental sighting
<i>Rana boylei</i>	foothill yellow-legged frog	Amphibians	None	SE CDFW: SSC	G3	S3	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	No	There is suitable habitat present within seasonal wetlands and vernal pools; however, the park is outside of the known range for this species.
<i>Rana draytonii</i>	California red-legged frog	Amphibians	FT	CDFW: SSC	G2G3	S2S3	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Low	No	There is suitable habitat present within seasonal wetlands and vernal pools; however, the park is outside of the known range for this species.

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Spea hammondi</i>	western spadefoot	Amphibians	None	CDFW: SSC	G2G3	S3	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Moderate	No	Although no spadefoot has been found in the park, vernal pools within the Study Area may provide suitable breeding habitat.
<i>Lithobates catesbeianus</i>	American Bullfrog	Amphibians, Non-native	None	None	None	None	Inhabits warm, sunny, open, permanent water - lakes, ponds, sloughs, reservoirs, marshes, slow river backwaters, irrigation canals, cattle tanks, and slow creeks.	High	Yes	Observed regularly throughout the park as an incidental sighting
<i>Accipiter cooperii</i>	Cooper's hawk	Birds	None	None	G5	S4	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	High	Yes	Observed during 2020 annual bird surveys
<i>Accipiter striatus</i>	Sharp-shinned Hawk	Birds	None	None	None	None	They require dense forest, ideally with a closed canopy, for breeding.	Low	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Aechmophorus clarkii</i>	Clark's grebe	Birds	None	None	None	None	Rushy lakes, sloughs; in winter, bays, ocean. freshwater lakes with large areas of both open water and marsh vegetation	Low	No	Little suitable habitat present
<i>Aeronautes saxatalis</i>	White-throated Swift	Birds	None	None	None	None	Scrub Nest on cliffs	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	Birds	None	None	None	None	Riparian areas and marshes build their nests low among vertical shoots of marsh vegetation, shrubs, or trees.	High	Yes	Observed regularly during annual bird surveys

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Agelaius tricolor</i>	tricolored blackbird	Birds	None	ST CDFW: SSC	G1G2	S1S2	Highly colonial species, most numerous in Central Valley & 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	Observed regularly during annual bird surveys
<i>Aimophila ruficeps</i>	rufous-crowned sparrow	Birds	None	None	None	None	coastal sagebrush, open chaparral, scrub oaks, pinyon pine, and other woody plants. on dry, open hillsides covered with grasses, rocks, and scattered shrubs,	Moderate	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Aix sponsa</i>	Wood Duck	Birds	None	None	None	None	Lakes and ponds open water alternates with 50–75% vegetative cover that the ducks can hide and forage in	High	Yes	Observed during 2019 annual bird surveys
<i>Ammodramus savannarum</i>	grasshopper sparrow	Birds	None	CDFW: SSC	G5	S3	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Moderate	Yes	Observed once in 2018 as an incidental sighting
<i>Anas platyrhynchos</i>	Mallard	Birds	None	None	None	None	Lakes and ponds	High	Yes	Observed during 2020 annual bird surveys
<i>Anser albifrons</i>	Greater White-fronted Goose	Birds	None	None	None	None	Lakes and ponds	Low	Yes	Observed in 2011 as an incidental sighting as a flyover. Does not breed here. Little suitable habitat
<i>Anser caerulescens</i>	Snow Goose	Birds	None	None	None	None	Lakes and Ponds	Low	Yes	Observed during 2013 annual bird surveys as a flyover. Does not breed here. Little suitable habitat

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Anthus rubescens</i>	American Pipit	Birds	None	None	None	None	grasslands open grassy areas, beaches, mudflats, dry river or lake beds, and the shores of lakes and rivers	High	Yes	Observed regularly during annual bird surveys. Do not breed here.
<i>Antigone canadensis</i>	Sandhill Crane	Birds	None	None	None	None	marshes or open, grassy sites	Low	Yes	Observed during 2018 annual bird surveys as a fly over
<i>Aphelocoma californica</i>	California Scrub-Jay	Birds	None	None	None	None	Scrub, oak woodlands, and suburban yards	High	Yes	Observed regularly during annual bird surveys
<i>Aquila chrysaetos</i>	golden eagle	Birds	None	CDFW: FP	G5	S3	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.	low	Yes	Observed during 2014 annual bird surveys as a flyover but no suitable nesting sites are available
<i>Archilochus alexandri</i>	Black-chinned Hummingbird	Birds	None	None	None	None	open woodlands In arid areas, most often found near cottonwood, sycamore, willow, salt-cedar, sugarberry, and oak.	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Ardea alba</i>	great egret	Birds	None	None	G5	S4	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	High	Yes	Observed regularly during annual bird surveys
<i>Ardea herodias</i>	great blue heron	Birds	None	None	G5	S4	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	High	Yes	Observed regularly during annual bird surveys

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Athene cunicularia</i>	burrowing owl	Birds	None	CDFW: SSC	G4	S3	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.	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Aythya collaris</i>	Ring-necked Duck	Birds	None	None	None	None	Lakes and ponds frequently seen in quite shallow waters (four feet deep or less), where patches of open water are fringed with aquatic or emergent vegetation such as sedges, lilies, and shrubs.	Moderate	Yes	Observed during 2020 annual bird surveys. Do not breed here
<i>Baeolophus inornatus</i>	Oak titmouse	Birds	None	None	None	None	Oak woods, pinyon-juniper areas where oaks meet streamside trees or pines	High	Yes	Observed regularly during annual bird surveys
<i>Bombycilla cedrorum</i>	Cedar Waxwing	Birds	None	None	None	None	open woodlands deciduous, coniferous, and mixed woodlands, particularly areas along streams.	Moderate	Yes	Observed during 2017 annual bird surveys. Do not breed here
<i>Botaurus lentiginosus</i>	American Bittern	Birds	None	None	None	None	marshes with tall vegetation	Low	Yes	Observed in 2013 as an incidental sighting
<i>Branta canadensis</i>	Canada Goose	Birds	None	None	None	None	marshes many habitats near water, grassy fields, and grain fields.	High	Yes	Observed regularly during annual bird surveys
<i>Bubo virginianus</i>	Great Horned Owl	Birds	None	None	None	None	forests secondary-growth woodlands, swamps, orchards, and agricultural areas	High	Yes	Observed during 2020 annual bird surveys
<i>Bucephala albeola</i>	Bufflehead	Birds	None	None	None	None	Lakes and ponds range is limited by the distribution of Northern Flickers, which are their main source of nesting cavities.	Moderate	Yes	Observed during 2019 annual bird surveys. Do not breed here

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Bucephala clangula</i>	Common Goldeneye	Birds	None	None	None	None	Lakes and ponds	Moderate	Yes	Observed during 2017 annual bird surveys. Do not breed here
<i>Buteo jamaicensis</i>	Red-tailed Hawk	Birds	None	None	None	None	open woodlands	High	Yes	Observed regularly during annual bird surveys
<i>Buteo lagopus</i>	Rough-legged Hawk	Birds	None	None	None	None	grasslands	Moderate	Yes	Observed during 2012 annual bird surveys. Does not breed here.
<i>Buteo lineatus</i>	Red-shouldered Hawk	Birds	None	None	None	None	forests they tend to live in stands with an open subcanopy	High	Yes	Observed regularly during annual bird surveys
<i>Buteo regalis</i>	ferruginous hawk	Birds	None	None	G4	S3S4	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	Yes	Observed during 2019 annual bird surveys. Does not breed here
<i>Buteo swainsoni</i>	Swainson's hawk	Birds	None	ST	G5	S3	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & 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	Observed regularly during annual bird surveys
<i>Butorides virescens</i>	Green Heron	Birds	None	None	None	None	marshes swamps, marshes, lakes, ponds, impoundments, and other wet habitats with trees and shrubs to provide secluded nest sites.	Moderate	Yes	Observed in 2019 as an incidental sighting

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Calidris minutilla</i>	Least Sandpiper	Birds	None	None	None	None	marshes they stop on coastal mudflats, rocky shorelines, and inland habitats including wet meadows, flooded fields, and muddy edges of lakes, ponds, and ditches.	Low	Yes	Observed during 2014 annual bird surveys. Does not breed here
<i>Callipepla californica</i>	California Quail	Birds	None	None	None	None	scrub coastal sagebrush, chaparral, foothills,	High	Yes	Observed regularly during annual bird surveys
<i>Calypte anna</i>	Anna's Hummingbird	Birds	None	None	None	None	open woodlands chaparral, coastal scrub, oak savannahs, and open woodland and suburban areas.	High	Yes	Observed during 2020 annual bird surveys
<i>Calypte costae</i>	Costa's hummingbird	Birds	None	None	G5	S4	Deserts, washes, sage scrub Mostly in dry and open habitats having a good variety of plant life	Low	No	Outside its typical range
<i>Cardellina pusilla</i>	Wilson's Warbler	Birds	None	None	None	None	scrub willow, alder, and shrubby thickets near streams up	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Cathartes aura</i>	Turkey Vulture	Birds	None	None	None	None	open woodlands mixed farmland, forest, and rangeland.	High	Yes	Observed regularly during annual bird surveys
<i>Catharus guttatus</i>	Hermit Thrush	Birds	None	None	None	None	open woodlands open areas inside forests, such as trails, pond edges, mountain glades, or areas partially opened up by fallen trees.	Moderate	Yes	Observed in 2012 as an incidental sighting
<i>Chaetura vauxi</i>	Vaux's Swift	Birds	None	CDFW: SSC	G5	S2S3	forests use mature and old-growth coniferous and mixed forests for nesting, especially those with plenty of hollow trees.	Low	No	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR, but did not find any records within the last 10yrs

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<i>Chamaea fasciata</i>	Wrentit	Birds	None	None	None	None	Chaparral, brush, parks, garden shrubs. dense low growth	Moderate	No	Suitable habitat is present however it has not been observed
<i>Charadrius vociferus</i>	Killdeer	Birds	None	None	None	None	Grasslands, open areas such as sandbars, mudflats, and grazed fields.	High	Yes	Observed regularly during annual bird surveys
<i>Chondestes grammacus</i>	Lark Sparrow	Birds	None	None	None	None	grasslands open grassy habitats with scattered trees and shrubs including orchards, fallow fields, open woodlands, mesquite grasslands, savanna, sagebrush steppe, and grasslands.	High	Yes	Observed regularly during annual bird surveys
<i>Chordeiles acutipennis</i>	Lesser Nighthawk	Birds	None	None	None	None	deserts inhabit deserts, areas with scrubby vegetation, dry washes, and agricultural fields.	Low	Yes	Observed in 2021 as an incidental sighting and in 2019 during the annual point count survey
<i>Circus hudsonius</i>	Northern Harrier	Birds	None	CDFW: SSC	None	None	Grasslands, large, undisturbed tracts of wetlands and grasslands with low, thick vegetation.	High	Yes	Observed regularly during annual bird surveys
<i>Colaptes auratus</i>	Northern Flicker	Birds	None	None	None	None	open woodlands, forest edges, and open fields with scattered trees, as well as city parks and suburbs.	High	Yes	Observed regularly during annual bird surveys
<i>Contopus cooperi</i>	Olive-sided flycatcher	Birds	None	CDFW: SSC	G4	S3	open woodlands use openings or edges in the forest near water	moderate	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Contopus sordidulus</i>	Western Wood-Pewee	Birds	None	None	None	None	open woodlands, forests with larger trees, open understories, and standing dead trees.	High	Yes	Observed during 2019 annual bird surveys
<i>Corvus brachyrhynchos</i>	American Crow	Birds	None	None	None	None	open woodlands any open place that offers a few trees to perch in and a reliable source of food.	High	Yes	Observed regularly during annual bird surveys

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<i>Corvus corax</i>	Common Raven	Birds	None	None	None	None	forests can live in nearly any habitat	High	Yes	Observed regularly during annual bird surveys
<i>Cygnus columbianus</i>	Tundra Swan	Birds	None	None	None	None	Lakes and ponds extensive wetlands and lakes with long shorelines that support pondweed.	Low	Yes	Observed during 2012 annual bird surveys as a flyover
<i>Cypseloides niger</i>	black swift	Birds	None	CDFW: SSC	G4	S2	Open sky over mountains, coastal cliffs Nests on ledges or in crevices in steep cliffs, either along coast or near streams or waterfalls in mountains.	Low	No	Don't have suitable nesting habitat
<i>Egretta thula</i>	snowy egret	Birds	None	None	None	None	marshes	Moderate	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Elanus leucurus</i>	white-tailed kite	Birds	None	CDFW: FP	G5	S3S4	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	High	Yes	Observed regularly during annual bird surveys
<i>Empidonax difficilis</i>	Pacific-Slope Flycatcher	Birds	None	None	None	None	Forests: shady coniferous and mixed woodlands, especially in places near water where the canopy is partly open.	High	Yes	Observed during 2019 annual bird surveys
<i>Empidonax trailii</i>	Willow flycatcher	Birds	None	SE	G5	S1S2	marshes willows or other shrubs near standing or running water.	Low	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR as a flyover only
<i>Eremophila alpestris</i>	Horned Lark	Birds	None	None	G5T4Q	S4	grasslands or bare, dry ground and areas of short, sparse vegetation	High	Yes	Observed regularly during annual bird surveys

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<i>Euphagus cyanocephalus</i>	Brewer's Blackbird	Birds	None	None	None	None	towns huge variety of natural habitats – grasslands, marshes, meadows, woodland, coastal scrub, chaparral, and sagebrush – as well as many human-created habitats.	High	Yes	Observed regularly during annual bird surveys
<i>Falco columbarius</i>	merlin	Birds	None	None	G5	S3S4	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.	moderate	Yes	Observed during 2019 annual bird surveys
<i>Falco mexicanus</i>	Prairie Falcon	Birds	None	None	G5	S4	grasslands, shrub steppe desert, areas of mixed shrubs and grasslands	moderate	Yes	Observed during 2019 annual bird surveys
<i>Falco peregrinus</i>	Peregrine Falcon	Birds	None	None	None	None	shorelines open habitat, but with a greater likelihood along barrier islands, mudflats, coastlines, lake edges, and mountain chains	moderate	Yes	Observed during 2018 annual bird surveys
<i>Falco sparverius</i>	American Kestrel	Birds	None	None	None	None	grasslands open areas with short ground vegetation and sparse trees.	High	Yes	Observed regularly during annual bird surveys
<i>Fulica americana</i>	American Coot	Birds	None	None	None	None	Lakes and ponds heavy stands of emergent aquatic vegetation along at least some portion of the shoreline	High	Yes	Observed regularly during annual bird surveys
<i>Geothlypis trichas sinuosa</i>	Common yellowthroat	Birds	None	None	None	None	Swamps, marshes, wet thickets, edges marshes and other very wet habitats with dense low growth.	low	No	suitable habitat is available but has not been observed within the park
<i>Haemorhous mexicanus</i>	House Finch	Birds	None	None	None	None	towns natural habitats including dry desert, desert grassland, chaparral, oak savannah, streamside's, and open coniferous forests	High	Yes	Observed regularly during annual bird surveys

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<i>Haliaeetus leucocephalus</i>	bald eagle	Birds	Delisted CDFW: FP	SE	G5	S3	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Low	Yes	Observed during 2014 and 2015 annual bird surveys as flyovers but there is no suitable habitat for breeding.
<i>Himantopus mexicanus</i>	Black-necked Stilt	Birds	None	None	None	None	marshes inhabit shallow wetlands with limited vegetation, including salt ponds and pans, flooded areas along rivers, shallow lagoons, saltmarshes, mangrove swamps, and mudflats.	Moderate	Yes	Observed during 2017 annual bird surveys
<i>Hirundo rustica</i>	Barn Swallow	Birds	None	None	None	None	grasslands forage in open areas throughout most of the continent, including suburban parks and ball fields, agricultural fields, beaches, and over open water such as lakes, ponds and coastal waters.	High	Yes	Observed during 2019 annual bird surveys
<i>Icterus bullockii</i>	Bullock's Oriole	Birds	None	None	None	None	open woodlands breed in riparian and open woodlands, including urban parks. They favor areas where the trees are large and spaced well apart or in isolated clumps.	High	Yes	Observed regularly during annual bird surveys
<i>Ixoreus naevius</i>	Varied Thrush	Birds	None	None	None	None	forests In winter it may be found in a broader range of habitats, including parks, gardens, lakeshores, and riparian areas where fruit and berries are abundant.	Moderate	Yes	Observed in 2013 as an incidental sighting
<i>Junco hyemalis</i>	Dark-eyed Junco	Birds	None	None	None	None	forests During winter and on migration they use a wider variety of habitats including open woodlands, fields, roadsides, parks, and gardens.	Moderate	Yes	Observed during 2020 annual bird surveys
<i>Lanius ludovicianus</i>	Loggerhead shrike	Birds	None	CDFW: SSC	G4	S4	open woodlands Nests in small trees and tall shrubs within and adjacent to grasslands and open undeveloped areas.	High	Yes	Observed during 2016 annual bird surveys

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<i>Larus argentatus</i>	Herring gull	Birds	None	None	None	None	shorelines	none	Yes	Observed during 2015 annual bird surveys as a flyover
<i>Larus delawarensis</i>	Ring-billed Gull	Birds	None	None	None	None	Lakes and ponds reservoirs, lakes, ponds, streams, landfills, parking lots, and shopping malls	low	Yes	Observed during 2016 annual bird surveys
<i>Laterallus jamaicensis coturniculus</i>	California black rail	Birds	None	ST	G3G4T1	S1	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low	No	Seasonal wetlands do not have a sufficient hydroperiod to support dense freshwater marsh vegetation that this species requires for breeding.
<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher	Birds	None	None	None	None	marshes They use wet meadows in lowlands and foothills that are dotted with freshwater ponds for foraging.	low	Yes	Observed during 2014 annual bird surveys
<i>Limosa fedoa</i>	Marbled godwit	Birds	None	None	None	None	marshes Prairies, pools, shores, tide flats.	low	No	
<i>Lophodytes cucullatus</i>	Hooded Merganser	Birds	None	None	None	None	Lakes and ponds During migration they stop in a wider range of habitats, including open waters of rivers and lakes, brackish coastal bays, tidal creeks, and seasonally flooded forest.	low	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Mareca americana</i>	American Wigeon	Birds	None	None	None	None	Lakes and ponds they forage and rest in wetlands, rivers, lakes, impoundments, estuaries, bays, flooded fields, and tidal flats that typically have plentiful vegetation both above and below the water surface.	Moderate	Yes	Observed during 2020 annual bird surveys

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<i>Megaceryle alcyon</i>	Belted Kingfisher	Birds	None	None	None	None	Lakes and ponds They hunt in unclouded water that allows them to see prey below the surface, with perches nearby but minimal vegetation obstructing the water. Some of their most common habitats are streams, rivers, ponds, lakes, estuaries, and calm marine waters.	low	Yes	Observed during 2019 annual bird surveys
<i>Melanerpes formicivorus</i>	Acorn Woodpecker	Birds	None	None	None	None	open woodlands oak and pine-oak woodlands	High	Yes	Observed regularly during annual bird surveys
<i>Melanerpes lewis</i>	Lewi's woodpecker	Birds	None	None	G4	S4	open woodlands They also breed in woodlands near streams, oak woodlands, orchards, and pinyon-juniper woodlands.	High	Yes	Observed in 2021 as an incidental sighting
<i>Melospiza lincolnii</i>	Lincoln's Sparrow	Birds	None	None	None	None	Scrub. At lower elevations they use patches of aspens, cottonwoods, and willows as well as shrubby areas near streams. During migration they stop over in fields, forest edges, and other areas with thickets.	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Melospiza melodia</i>	Song Sparrow	Birds	None	None	None	None	enormous variety of open habitats, including tidal marshes, arctic grasslands, desert scrub, pinyon pine forests, aspen parklands, prairie shelterbelts, Pacific rain forest, chaparral, agricultural fields, overgrown pastures, freshwater marsh and lake edges, forest edges, and suburbs.	high	Yes	Observed during 2015 annual bird surveys
<i>Melospiza crissalis</i>	California Towhee	Birds	None	None	None	None	scrub dense chaparral scrub that lines coastal slopes and foothills	Moderate	Yes	Observed regularly during annual bird surveys
<i>Mergus merganser</i>	Common Merganser	Birds	None	None	None	None	Lakes and ponds large lakes, rivers, and reservoirs	Low	Yes	Observed during 2015 annual bird surveys

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<i>Mimus polyglottos</i>	Northern Mockingbird	Birds	None	None	None	None	towns found in areas with open ground and with shrubby vegetation like hedges, fruiting bushes, and thickets.	High	Yes	Observed regularly during annual bird surveys
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	Birds	None	None	None	None	standing dead trees with natural cavities or those created by woodpeckers.	High	Yes	Observed regularly during annual bird surveys
<i>Numenius americanus</i>	long-billed curlew	Birds	None	None	G5	S2	Grasslands, wetlands, tidal estuaries, mudflats, flooded fields less than 6 inches deep	Moderate	Yes	Observed during 2016 annual bird surveys
<i>Numenius phaeopus</i>	Whimbrel	Birds	None	None	None	None	shorelines	none	No	No suitable habitat in the park
<i>Oreothlypis celata</i>	Orange-crowned Warbler	Birds	None	None	None	None	forests shrubs and low-growing vegetation in riparian settings, patches of forest, and chaparral	Moderate	Yes	Observed during 2018 annual bird surveys
<i>Oreothlypis ruficapilla</i>	Nashville Warbler	Birds	None	None	None	None	Forests Warblers are flexible in migration, frequenting nearly any brushy habitat.	low	Yes	Observed in 2013 as an incidental sighting
<i>Pandion haliaetus</i>	Osprey	Birds	None	None	None	None	Lakes and ponds shallow, fish-filled water, including rivers, lakes, reservoirs, lagoons, swamps, and marshes.	low	Yes	Observed during 2016 annual bird surveys.
<i>Passerculus sandwichensis</i>	Savannah Sparrow	Birds	None	None	None	None	grasslands with few trees, including meadows, pastures, grassy roadsides, sedge wetlands, and cultivated fields planted with cover crops like alfalfa.	High	Yes	Observed regularly during annual bird surveys
<i>Passerina amoena</i>	Lazuli Bunting	Birds	None	None	None	None	open woodlands in brushy hillsides, areas near streams, wooded valleys, thickets and hedges along agricultural fields, and residential gardens	low	Yes	Observed during 2016 annual bird surveys

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<i>Pelecanus erythrorhynchos</i>	American White Pelican	Birds	None	CDFW: SSC	None	None	Lakes and ponds forage in shallow water on inland marshes, along lake or river edges, and in wetlands	low	Yes	Observed during 2016 annual bird surveys as a flyover
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	Birds	None	None	None	None	Lakes and ponds wide variety of habitats by nesting on buildings, bridges, and other human-made structures	High	Yes	Observed regularly during annual bird surveys
<i>Phainopepla nitens</i>	Phainopepla	Birds	None	None	None	None	scrub open oak-sycamore woodlands, chaparral, boxthorn scrub, and Joshua tree desert, especially where fruit is available.	Moderate	Yes	Observed during 2020 annual bird surveys
<i>Phalacrocorax auritus</i>	double-crested cormorant	Birds	None	None	G5	S4	Lakes and ponds Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	low	Yes	Observed during 2019 annual bird surveys
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak	Birds	None	None	None	None	forests A combination of large trees and rich understory seems ideal	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Pica nuttallii</i>	Yellow-billed magpie	Birds	None	None	G3G4	S3S4	open woodlands open oak woodlands and grassy oak savannas of central California.	Moderate	No	Even though there is suitable habitat they have not been observed within the park
<i>Picoides nuttallii</i>	Nuttall's woodpecker	Birds	None	None	None	None	open woodlands oak woodlands	High	Yes	Observed regularly during annual bird surveys
<i>Picoides pubescens</i>	Downy Woodpecker	Birds	None	None	None	None	forests Open woodlands, particularly deciduous woods and along streams.	Moderate	Yes	Observed during 2017 annual bird surveys
<i>Picoides villosus</i>	Hairy Woodpecker	Birds	None	None	None	None	in mature woodlands with medium to large trees.	low	Yes	Observed during 2011 annual bird surveys

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<i>Pipilo maculatus clementae</i>	Spotted towhee	Birds	None	None	None	None	scrub dry thickets, brushy tangles, forest edges, old fields, shrubby backyards, chaparral, coulees, and canyon bottoms, places with dense shrub cover and plenty of leaf litter for the towhees to scratch around in.	High	Yes	Observed regularly during annual bird surveys
<i>Piranga ludoviciana</i>	Western Tanager	Birds	None	None	None	None	forests open coniferous and mixed coniferous-deciduous woodlands	moderate	Yes	Observed during 2019 annual bird surveys
<i>Plegadis chihi</i>	White-faced Ibis	Birds	None	None	G5	S3S4	marshes forage in shallow wetlands, usually among short plants such as sedges, spikerush, glasswort, saltgrass, and greasewood	moderate	Yes	Observed during 2015 annual bird surveys
<i>Podilymbus podiceps</i>	Pied-billed Grebe	Birds	None	None	None	None	Lakes and ponds freshwater wetlands, wet fields, bays, sloughs, marshes, lakes, slow-moving rivers, and even sewage ponds.	moderate	Yes	Observed during 2017 annual bird surveys
<i>Psaltriparus minimus</i>	Bushtit	Birds	None	None	None	None	scrub open woods or scrubby areas, particularly pine-oak woodlands and chaparral, as well as suburbs and parks.	High	Yes	Observed during 2020 annual bird surveys
<i>Quiscalus mexicanus</i>	Great-tailed Grackle	Birds	None	None	None	None	towns chaparral and second-growth forest	low	Yes	Observed during 2014 annual bird surveys
<i>Recurvirostra americana</i>	American Avocet	Birds	None	None	None	None	marshes shallow fresh and saltwater wetlands, salt ponds, impoundments, and evaporation ponds.	moderate	Yes	Observed during 2014 annual bird surveys
<i>Regulus calendula</i>	Ruby-crowned Kinglet	Birds	None	None	None	None	forests mixed woods, isolated trees in meadows, coniferous and deciduous forests, mountain-shrub habitat, and floodplain forests of oak, pine, spruce or aspen	High	Yes	Observed during 2020 annual bird surveys

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<i>Riparia riparia</i>	bank swallow	Birds	None	ST	G5	S2	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	low	Yes	Observed during 2011 annual bird surveys but there is no suitable nesting habitat available.
<i>Salpinctes obsoletus</i>	Rock wren	Birds	None	None	None	None	deserts Arid or semiarid areas with exposed rock; desert to alpine habitats.	Moderate	Yes	Observed during 2018 annual bird surveys
<i>Sayornis nigricans</i>	Black Phoebe	Birds	None	None	None	None	open woodlands along riverbanks, lake shorelines, ephemeral ponds, parks, backyards, and even cattle tanks.	High	Yes	Observed regularly during annual bird surveys
<i>Sayornis saya</i>	Say's Phoebe	Birds	None	None	None	None	grasslands dry, sparsely vegetated areas including, sagebrush flats, badlands, dry barren foothills, canyons, and borders of deserts	High	Yes	Observed during 2020 annual bird surveys
<i>Selasphorus rufus</i>	Rufous hummingbird	Birds	None	None	G5	S1S2	open woodlands During their migration, look for them in mountain meadows	low	Yes	Observed during 2011 annual bird surveys
<i>Setophaga coronata</i>	Yellow-rumped Warbler	Birds	None	None	None	None	forests mature coniferous and mixed coniferous-deciduous woodlands	High	Yes	Observed regularly during annual bird surveys
<i>Setophaga petechia</i>	Yellow Warbler	Birds	None	CDFW: SSC	G5	S3S4	open woodlands thickets and other disturbed or regrowing habitats, particularly along streams and wetlands	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Sialia currucoides</i>	Mountain Bluebird	Birds	None	None	None	None	open woodlands pen areas with a mix of short grasses, shrubs, and trees. They avoid the most arid desert habitats.	Low	Yes	Observed in 2011 as an incidental sighting
<i>Sialia mexicana</i>	Western Bluebird	Birds	None	None	None	None	open woodlands open woodlands and at the edges of woods	High	Yes	Observed regularly during annual bird surveys

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Sitta carolinensis</i>	White-breasted Nuthatch	Birds	None	None	None	None	forests woodland edges and in open areas with large trees, such as parks, wooded suburbs, and yards.	High	Yes	Observed regularly during annual bird surveys
<i>Spatula cyanoptera</i>	Cinnamon teal	Birds	None	None	None	None	marshes plenty of emergent vegetation, and they are most abundant on large, permanent marshes	Moderate	Yes	Observed during 2014 annual bird surveys
<i>Spinus lawrencei</i>	Lawrence's goldfinch	Birds	None	None	G3G4	S4	Oak-pine woods, chaparral Often found close to water in fairly dry country.	Moderate	Yes	Observed during 2013 annual bird surveys
<i>Spinus psaltria</i>	Lesser Goldfinch	Birds	None	None	None	None	frequents thickets, weedy fields, woodlands, forest clearings, scrublands, farmlands, and even desert oases.	High	Yes	Observed regularly during annual bird surveys
<i>Spinus tristis</i>	American Goldfinch	Birds	None	None	None	None	open woodlands Weedy fields, open floodplains, and other overgrown areas, particularly with sunflower, aster, and thistle plants for food and some shrubs and trees for nesting.	High	Yes	Observed regularly during annual bird surveys
<i>Spizella breweri</i>	Brewer's Sparrow	Birds	None	None	G5	S4	scrub almost exclusively on the sagebrush ecosystem	low	Yes	Observed during 2015 annual bird surveys
<i>Spizella passerina</i>	Chipping Sparrow	Birds	None	None	None	None	open woodlands grassy forests, woodlands and edges, parks and shrubby or tree-lined backyards.	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	Birds	None	None	None	None	rivers and streams open areas often near water	High	Yes	Observed during 2019 annual bird surveys
<i>Sterna forsteri</i>	Forster's tern	Birds	None	None	None	None	marshes	low	Yes	Observed during 2014 annual bird surveys as a flyover

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Sturnella neglecta</i>	Western Meadowlark	Birds	None	None	None	None	open grasslands, prairies, meadows, and some agricultural fields	High	Yes	Observed regularly during annual bird surveys
<i>Tachycineta bicolor</i>	Tree Swallow	Birds	None	None	None	None	live near bodies of water that produce multitudes of flying insects for food	High	Yes	Observed regularly during annual bird surveys
<i>Tachycineta thalassina</i>	Violet-green Swallow	Birds	None	None	None	None	open woodlands open evergreen and deciduous woodlands, especially woodlands with standing dead trees that feature woodpecker holes or other natural cavities	Moderate	Yes	Observed during 2017 annual bird surveys
<i>Thryomanes bewickii</i>	Bewick's Wren	Birds	None	None	None	None	open woodlands brushy areas, scrub and thickets in open country, or open woodland	High	Yes	Observed regularly during annual bird surveys
<i>Toxostoma redivivum</i>	California thrasher	Birds	None	None	None	None	Chaparral, foothills, valley thickets Within its range, found in practically any lowland habitat with dense low brush.	low	No	Not very much dense low brush within the park.
<i>Tringa melanoleuca</i>	Greater Yellowlegs	Birds	None	None	None	None	marshes fresh and brackish wetlands, including mudflats, marshes, lake and pond edges, wet meadows, sewage ponds, and flooded agricultural fields such as rice paddies	Moderate	Yes	Observed during 2019 annual bird surveys
<i>Tringa semipalmata</i>	Willet	Birds	None	None	None	None	shorelines Marshes, wet meadows, mudflats, beaches.	low	No	Along migration path, but have not observed within the park
<i>Troglodytes aedon</i>	House Wren	Birds	None	None	None	None	open woodlands feature trees, shrubs, and tangles interspersed with clearings	High	Yes	Observed regularly during annual bird surveys

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Turdus migratorius</i>	American Robin	Birds	None	None	None	None	open woodlands lawns, fields, and city parks, as well as in more wild places like woodlands, forests, mountains up to near tree line, recently burned forests, and tundra	High	Yes	Observed regularly during annual bird surveys
<i>Tyrannus verticalis</i>	Western Kingbird	Birds	None	None	None	None	grasslands, desert shrub, savannah, pastures, cultivated fields, and urban land, often live near the edges of woodlands	High	Yes	Observed regularly during annual bird surveys
<i>Tyto alba</i>	Barn Owl	Birds	None	None	None	None	grasslands, deserts, marshes, agricultural fields, strips of forest, woodlots, ranchlands, brushy fields, and suburbs and cities	High	Yes	Observed occasionally during annual bird surveys
<i>Vireo gilvus</i>	Warbling Vireo	Birds	None	None	None	None	open woodlands mature deciduous woodlands, especially along streams, ponds, marshes, and lakes, but sometimes in upland areas away from water	Moderate	Yes	Observed in 2013 as an incidental sighting
<i>Zenaida macroura</i>	Mourning Dove	Birds	None	None	None	None	open woodlands open country, scattered trees, and woodland edges, but large numbers roost in woodlots during winter	Moderate	Yes	Observed regularly during annual bird surveys
<i>Zonotrichia atricapilla</i>	Golden-crowned Sparrow	Birds	None	None	None	None	scrub brush, riparian thickets, chaparral, and gardens	High	Yes	Observed regularly during annual bird surveys
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	Birds	None	None	None	None	scrub open or shrubby habitats, including tundra, high alpine meadows, and forest edges	High	Yes	Observed regularly during annual bird surveys
<i>Meleagris gallopavo</i>	Wild Turkey	Birds, Naturalized	None	None	None	None	open woodlands open forests with interspersed clearings	High	Yes	Observed regularly during annual bird surveys

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Passer domesticus</i>	House Sparrow	Birds, Naturalized	None	None	None	None	towns	High	Yes	Observed regularly during annual bird surveys
<i>Phasianus colchicus</i>	Ring-necked Pheasant	Birds, Naturalized	None	None	None	None	grasslands agricultural land and old fields—especially fields that are interspersed with grass ditches, hedges, marshes, woodland borders, and brushy groves	low	Yes	Observed in 2013 as an incidental sighting
<i>Streptopelia decaocto</i>	Eurasian Collared-Dove	Birds, Naturalized	None	None	None	None	towns open sites where grain is available, including farmyards, fields, and areas around silos	Moderate	Yes	Observed during 2018 annual bird surveys
<i>Sturnus vulgaris</i>	European Starling	Birds, Naturalized	None	None	None	None	towns pen, grassy areas in which to forage, a water source, and trees or buildings that contain suitable cavities or niches for nesting	High	Yes	Observed regularly during annual bird surveys
<i>Columba livia</i>	Rock Pigeon	Birds, Non-native	None	None	None	None	towns	Moderate	Yes	Observed during 2020 annual bird surveys
<i>Molothrus ater</i>	Brown-headed Cowbird	Birds, Non-native	None	None	None	None	grasslands with low and scattered trees as well as woodland edges, brushy thickets, prairies, fields, pastures, orchards, and residential areas	high	Yes	Observed during 2019 annual bird surveys
<i>Hypomesus transpacificus</i>	Delta smelt	Fish	FT	SE	G1	S1	open waters of bays, tidal rivers, channels, and sloughs upper estuary of the San Francisco Estuary and Sacramento-San Joaquin Delta	None	No	No suitable habitat
<i>Oncorhynchus mykiss irideus pop. 11</i>	steelhead - Central Valley DPS	Fish	FT	None	G5T2Q	S2	Populations in the Sacramento and San Joaquin rivers and their tributaries.	None	No	No suitable habitat
<i>Gambusia affinis</i>	Mosquitofish	Fish, Non-native	None	None	None	None	Aquatic.	High	Yes	Observed regularly in sediment basins as an incidental siting

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Andrena blennospermatis</i>	Blennosperma vernal pool andrenid bee	Invertebrates	None	None	G2	S2	This bee is oligolectic on vernal pool blennosperma. Bees nest in the uplands around vernal pools.	low	No	The vernal pool blennosperma has not been found within the park therefore this species is unlikely to occur with the park.
<i>Andrena subapasta</i>	An andrenid bee	Invertebrates	None	None	G1G2	S1S2	Collects pollen primarily from <i>Arenaria californica</i> but also <i>Orthocarpus erianthus</i> & <i>Lasthenia spp.</i>	moderate	No	There are suitable host plants present within the park – butter-n-eggs and goldfield was observed during site visits.
<i>Bombus crotchii</i>	Crotch bumble bee	Invertebrates	None	SCE	G3G4	S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	moderate	No	Even though there is suitable habitat they have not been observed within the park
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	Invertebrates	FE	None	G2	S2	Aquatic. Large, clay-bottomed vernal pool playas with turbid water	low	No	Vernal swales and pools may provide suitable habitat. Currently known distribution does not include Sacramento County.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Invertebrates	FT	None	G3	S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	High	Yes	Not observed within the park since 2000.
<i>Branchinecta mesovallensis</i>	midvalley fairy shrimp	Invertebrates	None	None	G2	S2S3	Vernal pools in the Central Valley.	moderate	No	Vernal swales and pools may provide suitable habitat.

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Cyzicus californicus</i>	California clam shrimp	Invertebrates	None	None	G2	None	Found in a variety of natural, and artificial, seasonally ponded habitat types including vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities.	High	Yes	Observed within the park during the 2016 and 2017 ECORP vernal pool survey
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Invertebrates	FT	None	G3T2	S3	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	low	No	There is suitable habitat present on site since there are elderberry shrubs. No bore holes were observed on any of the branches of the shrubs but this species has some potential to colonize the site.
<i>Dumontia oregonensis</i>	hairy water flea	Invertebrates	None	None	G1G3	S1	Vernal pools. In California, known only from Mather Field.	low	No	Vernal pools occur within the park; suitable habitat is present. However, the park is outside of the known range of this species.
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	Invertebrates	None	None	G2?	S2?	Aquatic.	moderate	No	There is suitable habitat present within the various aquatic features found within the park.
<i>Ixodes sp.</i>	Deer tick	Invertebrates	None	None	None	None	forested regions with a wide variety of low bushes and shrubs	High	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Invertebrates	FE	None	G4	S3S4	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	High	Yes	Observed within the park during the 2017 ECORP vernal pool survey

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Linderiella occidentalis</i>	California linderiella	Invertebrates	None	None	G2G3	S2S3	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	High	Yes	Observed within the park during the 2016 and 2017 ECORP vernal pool survey
<i>Antrozous pallidus</i>	pallid bat	Mammals	None	CDFW: SSC	G4	S3	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.	moderate	No	There is marginal roosting habitat within the hollows of mature Fremont cottonwoods on site. There was 1 CNDDDB occurrences for pallid bat within the 9 quad search area
<i>Canis latrans</i>	Coyote	Mammals	None	None	None	None	brush, scrub, shrub, and herbaceous habitats	High	Yes	Observed regularly on game cameras
<i>Erethizon dorsatum</i>	North American porcupine	Mammals	None	None	G5	S3	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	
<i>Lasionycteris noctivagans</i>	silver-haired bat	Mammals	None	None	G3G4	S3S4	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	moderate	No	There is marginal roosting habitat within the hollows of mature Fremont cottonwoods on site and nearby permanently to semi permanently inundated aquatic features on site provide drinking water for bats. There is 2 CNDDDB occurrence for silver-haired bat within the 9 quad search area
<i>Lepus californicus</i>	Black-tailed Jack rabbit	Mammals	None	None	None	None	herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats	High	Yes	Observed regularly within the park as an incidental sighting
<i>Lontra canadensis</i>	River Otter	Mammals	None	None	None	None	lakes and streams		Yes	Observed in 2018 through game camera monitoring

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Lynx rufus</i>	Bobcat	Mammals	None	None	None	None	dense vegetative cover or steep rocky terrain	High	Yes	Observed regularly on game cameras
<i>Mephitis</i>	Striped skunk	Mammals	None	None	None	None	grass/forb stages of most habitats, riparian areas, and many natural, and human-induced, herbaceous shrub and forest ecotones	High	Yes	Observed regularly on game cameras
<i>Microtus californicus</i>	California vole	Mammals	None	None	None	None	montane riparian, dense annual grassland, and wet meadow	High	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Odocoileus hemionus</i>	Black-tailed mule deer	Mammals	None	None	None	None	many habitats	High	Yes	Observed commonly within the park as an incidental sighting and regularly on game cameras
<i>Otospermophilus beecheyi</i>	California ground squirrel	Mammals	None	None	None	None	grasslands and openings in most brush and forest habitats	High	Yes	Observed regularly within the park as an incidental sighting
<i>Perognathus inornatus</i>	San Joaquin Pocket Mouse	Mammals	None	CDFW: SSC	G2G3	S2S3	dry open grasslands or scrub	High	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Peromyscus maniculatus</i>	deer mouse	Mammals	None	None	None	None	many habitats	High	Yes	Observed regularly within the park as an incidental sighting
<i>Procyon lotor</i>	Raccoon	Mammals	None	None	None	None	woodlands	High	Yes	Observed regularly on game cameras
<i>Puma concolor</i>	Mountain lion	Mammals	None	None	None	None	foothills and mountains wherever deer are present	Moderate	Yes	Observed scat during 2018 Ehnisz biological assessments
<i>Rattus norvegicus</i>	Norway rat	Mammals	None	None	None	None	towns	High	Yes	Observed in 2012 as an incidental sighting

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Reithrodontomys megalotis</i>	Western Harvest Mouse	Mammals	None	None	None	None	grasslands, shrublands	High	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Sylvilagus audubonii</i>	Audubon's cottontail	Mammals	None	None	None	None	grasslands, open forests, and desert shrub	High	Yes	Observed regularly within the park as an incidental sighting
<i>Sylvilagus bachmani</i>	Brush rabbit	Mammals	None	None	None	None	dense, brushy cover in chaparral, oak habitats and grasslands or scrub	High	Yes	Observed regularly within the park as an incidental sighting
<i>Taxidea taxus</i>	American badger	Mammals	None	CDFW: SSC	G5	S3	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.	moderate	No	Suitable habitat is available for this species. There are 3 CNDDDB occurrence for American badger within the 9 quad search area
<i>Thomomys bottae</i>	Valley pocket gopher	Mammals	None	None	None	None	grasslands or understories of woodlands	High	Yes	Observed regularly digging burrows throughout the park.
<i>Coluber constrictor</i>	Yellow-bellied racer	Reptiles	None	None	None	None	Prefers open areas with sunny exposure - meadows, grassland, sagebrush flats, brushy chaparral, woodlands, riparian areas such as pond edges, and forest openings.	moderate	Yes	Observed in 2019 as an incidental sighting
<i>Contia tenuis</i>	Sharp-tailed Snake	Reptiles	None	None	None	None	found in mixed woodlands with oaks and conifers and human habitats most often seen after it rains	low	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Crotalus oreganus</i>	Northern Pacific rattlesnake	Reptiles	None	None	None	None	rocky areas in grasslands, mixed woodlands, montane forests, pinyon juniper, sagebrush.	High	Yes	Observed regularly throughout the park as an incidental sighting

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Elgaria multicarinata</i>	Alligator lizard	Reptiles	None	None	None	None	Grassland, open forest, chaparral. Common in foothill oak woodlands. Commonly found hiding under rocks, logs, boards, trash, other surface cover.	High	Yes	Observed commonly within the park as an incidental sighting
<i>Emys marmorata</i>	western pond turtle	Reptiles	None	CDFW: SSC	G3G4	S3	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.	moderate	Yes	Observed once in 2018 as an incidental sighting
<i>Lampropeltis californiae</i>	California king snake	Reptiles	None	None	None	None	Utilizes a wide variety of habitats - forests, mixed woodlands, grassland, chaparral, farmlands, often near ponds, marshes, or streams.	High	Yes	Observed occasionally throughout the park as an incidental sighting
<i>Pituophis catenifer</i>	Gopher snake	Reptiles	None	None	None	None	Found in a variety of habitats -open grassland and brushland, mixed woodlands, coniferous forest, agricultural farmland, chaparral, marshes, around suburban homes and garden sheds, and riparian zones	High	Yes	Observed regularly throughout the park as an incidental sighting
<i>Plestiodon gilberti</i>	Gilbert's Skink	Reptiles	None	None	None	None	Grassland, chaparral, woodlands, and pine forests. Prefers areas where moisture is present nearby.	moderate	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Plestiodon skiltonianus</i>	Western skink	Reptiles	None	None	None	None	Grassland, woodlands, pine forests, sagebrush, chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers.	High	Yes	Observed occasionally throughout the park as an incidental sighting
<i>Sceloporus occidentalis</i>	Western fence lizard	Reptiles	None	None	None	None	Found in a wide variety of open, sunny habitats, including woodlands, grasslands, scrub, chaparral, forests, along waterways, suburban dwellings	High	Yes	Observed regularly within the park as an incidental sighting

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	Habitat	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Thamnophis elegans</i>	Western Terrestrial Garter Snake	Reptiles	None	None	None	None	Inhabits stream sides, springs, mountain lakes, in grassland, meadows, brush, woodland, and coniferous forest.	High	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Thamnophis gigas</i>	giant gartersnake	Reptiles	FT	ST	G2	S2	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the gartersnakes in California.	Low	No	No suitable habitat present:irrigation ditches that run throughout the Study Area do not support a perennial hydrologic regime.
<i>Thamnophis sirtalis fitchi</i>	valley gartersnake	Reptiles	None	None	None	None	Utilizes a wide variety of habitats - forests, mixed woodlands, grassland, chaparral, farmlands, often near ponds, marshes, or streams.	moderate	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Trachemys scripta</i>	Red-eared Slider	Reptiles, Non-native	None	None	None	None	Lives mostly in calm freshwater areas with abundant aquatic vegetation, such as sluggish rivers, ponds, shallow streams, marshes, lakes, and reservoirs.	High	Yes	Observed regularly in the sediment basins as incidental sightings

Status Key:

Federal (USFWS)

FE: Federally-listed Endangered

FT: Federally-listed Threatened

FD: Federally-delisted

FC: Candidate federal listing

State

SE: State-listed Endangered

ST: State-listed Threatened

SCE: State Candidate Endangered

SSC: State Species of Special Concern

CFP: California Fully Protected Species

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: 2013 Prairie City SVRA Biological Resources Assessment, 2011-2020 PCSVRA HMS reports, 2016 - 2017 ECORP branchiopod survey, 2021 Ehnisz General Biological Assessment, incidental sightings

Table 6. Plant Inventory. List generated based on nine 7.5' USGS Quads surrounding the SVRA footprint - Citrus Heights, Folsom, Folsom SE, Clarksville, Buffalo Creek, Carmichael, Elk Grove, Sloughouse, and Carbondale.

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	CA Rare Plant Status	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Achyrachaena mollis</i>	Blow-wives	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Acmispon americanus</i>	Spanish lotus, American bird's foot trefoil	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Acmispon parviflorus</i>	Hill lotus	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Acmispon wrangelianus</i>	Chilean bird's foot trefoil	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Aesculus californica</i>	California Buckeye	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Alisma triviale</i>	Northern water plantain	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Alopecurus saccatus</i>	Meadow foxtail	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Ammannia robusta</i>	Grand Ammannia	Vegetation	None	None	None	None	None	N/A	Yes	Observed in 2019 as an incidental sighting
<i>Amsinckia intermedia</i>	Common fiddleneck	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Amsinckia menziesii</i>	Small flowered fiddleneck	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Arctostaphylos myrtifolia</i>	lone manzanita	Vegetation	FT	None	G1	S1	1B.2	None	No	No suitable habitat
<i>Asclepias fascicularis</i>	Narrow leaf milkweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Baccharis pilularis</i>	Coyote bush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Baccharis salicifolia</i>	Mulefat	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Blennosperma nanum var. nanum</i>	Common blennosperma	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Brodiaea coronaria</i>	Crown brodiaea	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2014 vernal pool relevé survey
<i>Brodiaea elegans</i>	Harvest brodiaea	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Brodiaea minor</i>	Vernal pool brodiaea	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Brodiaea rosea ssp. vallicola</i>	valley brodiaea	Vegetation	None	None	G5T3	S3	4.2	High	No	Suitable habitat present but have not observed within the park
<i>Calandrinia breweri</i>	Brewer's calandrinia	Vegetation	None	None	G4	S4	4.2	High	No	Suitable habitat present but have not observed within the park
<i>Calandrinia ciliata</i>	Fringed red maids	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Calandrinia menziesii</i>	Red maids	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Callitriche marginata</i>	Water starwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Calochortus luteus</i>	Yellow mariposa lily	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Calycadenia spicata</i>	Spiked rosin weed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Calystegia stebbinsii</i>	Stebbin's morning-glory	Vegetation	FE	SE	G1	S1	1B.1	Low	No	No suitable habitat
<i>Cardamine oligosperma</i>	Little western bittercress	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Castilleja attenuata</i>	Valley tassels	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Castilleja campestris ssp. campestris</i>	Field owl's-clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Castilleja campestris ssp. succulenta</i>	Fleshy Owl's-clover	Vegetation	FT	SE	G4?T2	S2S3	1B.2	High	No	Suitable habitat present but have not observed within the park
<i>Castilleja lacera</i>	Cutleaf owl's-clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	Vegetation	FE	Rare	G1	S1	1B.1	None	No	No suitable habitat

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<i>Centromadia fitchii</i>	Spikeweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed during the 2015 vernal pool relevé survey
<i>Centromadia fitchii</i>	Tarweed	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Centromadia pungens</i>	Tarweed	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Chlorogalum angustifolium</i>	Narrowleaf Soap plant	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	Vegetation	None	None	G3	S3	1B.2	low	No	Just outside its normal range
<i>Chlorogalum pomeridianum</i>	Wavyleaf soap plant	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Cicendia quadrangularis</i>	Cicendia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Clarkia biloba ssp. brandegeae</i>	Brandegee's clarkia	Vegetation	None	None	G4G5T4	S4	4.2	High	No	Suitable habitat present but have not observed within the park
<i>Clarkia purpurea ssp. quadrivulnera</i>	purple clarkia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Claytonia perfoliata</i>	Miner's lettuce	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Collinsia sparsiflora</i>	Few flowered collinsia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Crassula aquatica</i>	Water pygmyweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Crassula connata</i>	Pigmy weed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Crocانthemum suffrutescens</i>	Bisbee Peak rush-rose	Vegetation	None	None	G2?Q	S2?	3.2	Low	No	Suitable habitat present but have not observed within the park
<i>Croton setiger</i>	Turkey-mullein, Dove weed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Cyperus eragrostis</i>	Tall flatsedge	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Damasonium californicum</i>	California damasonium	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Daucus pusillus</i>	American wild carrot	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Delphinium variegatum</i>	Royal larkspur	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Deschampsia danthonioides</i>	Annual hairgrass	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Dichelostemma capitatum ssp. capitatum</i>	Blue dicks	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Diplacus tricolor</i>	Tri-color monkeyflower	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Downingia bicornuta</i>	Double horn calico flower	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Downingia ornatissima</i>	Folded downingia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Downingia pusilla</i>	dwarf downingia	Vegetation	None	None	GU	S2	2B.2	High	No	Suitable habitat present but have not observed within the park
<i>Eleocharis acicularis</i>	Spike rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Eleocharis macrostachya</i>	Creeping Spike rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Eleocharis palustris</i>	Common spike rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Elymus multisetus</i>	Squirreltail grass	Vegetation	None	None	None	None	None	N/A	Yes	Observed in 2019 as an incidental sighting
<i>Epilobium brachycarpum</i>	Annual fireweed, Autumn willowweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Epilobium canum</i>	Willowherb	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Epilobium densiflorum</i>	Dense boisduvliia	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2011 vernal pool relevé survey
<i>Epilobium torreyi</i>	Brook willowherb	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Eriogonum apricum</i> var. <i>apricum</i>	lone buckwheat	Vegetation	FE	SE	G2T1	S1	1B.1	Low	No	Just outside its normal range
<i>Eriogonum apricum</i> var. <i>prostratum</i>	Irish Hill buckwheat	Vegetation	FE	SE	G2T1	S1	1B.1	Low	No	Just outside its normal range
<i>Eriogonum fasciculatum</i>	CA buckwheat	Vegetation	None	None	None	None	None	N/A	Yes	Observed regularly within the park as an incidental sighting
<i>Eriogonum nudum</i>	Nude buckwheat	Vegetation	None	None	None	None	None	N/A		Observed in 2018 as an incidental sighting
<i>Eriophyllum jepsonii</i>	Jepson's woolly sunflower	Vegetation	None	None	G3	S3	4.3	Low	No	No supporting specialized habitats or soil types.
<i>Eryngium castrense</i>	Great valley button celery	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Eryngium pinnatisectum</i>	Tuolumne button-celery	Vegetation	None	None	G2	S2	1B.2	High	No	Suitable habitat present but have not observed within the park
<i>Eryngium vaseyi</i>	Coyote thistle	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Eschscholzia californica</i>	California poppy	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Eschscholzia lobbiai</i>	Frying pans	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Festuca microstachys</i>	Small fescue	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Frangula californica ssp. tomentella</i>	California coffeeberry	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Fraxinus latifolia</i>	Oregon ash	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	Vegetation	FE	Rare	G1	S1	1B.2	Low	No	No supporting specialized habitats or soil types.
<i>Fritillaria agrestis</i>	stinkbells	Vegetation	None	None	G3	S3	4.2	Medium	No	Suitable habitat present but have not observed within the park
<i>Galium aparine</i>	Bedstraw	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Galium californicum ssp. sierrae</i>	El Dorado bedstraw	Vegetation	FE	Rare	G5T1	S1	1B.2	Low	No	No supporting specialized habitats or soil types.
<i>Glyceria occidentalis</i>	western manna grass	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Gratiola ebracteata</i>	Hedge hyssop	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	Vegetation	None	SE	G2	S2	1B.2	High	No	Suitable habitat present but have not observed within the park
<i>Grindelia camporum</i>	Gum plant	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hesperolinon californicum</i>	California dwarf-flax	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Heterocodon rariflorum</i>	Rareflower heterocodon	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Heteromeles arbutifolia</i>	Toyon	Vegetation	None	None	None	None	None	N/A	Yes	Observed within the environmental training center
<i>Heterotheca grandiflora</i>	telegraph weed	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Holocarpha obconica</i>	San Joaquin tarweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Holocarpha virgata ssp. virgata</i>	Yellowflower tarweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Hordeum brachyantherum</i>	Meadow barley	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Horkelia parryi</i>	Parry's horkelia	Vegetation	None	None	G2	S2	1B.2	Low	No	No supporting specialized habitats or soil types.

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<i>Isoetes orcuttii</i>	Orcutt's quillwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Juglans hindsii</i>	Black walnut	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Juncus balticus</i>	Baltic rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Juncus bufonius</i>	Toad rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Juncus leiospermus var. ahartii</i>	Ahart's dwarf rush	Vegetation	None	None	G2T1	S1	1B.2	High	No	Suitable habitat present but have not observed within the park
<i>Juncus tenuis</i>	Slender rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Juncus uncialis</i>	Inch-high rush	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Juncus xiphioides</i>	Iris-leaved juncus	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Lasthenia californica</i>	California goldfields	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Lasthenia fremontii</i>	Fremont's goldfields	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Lasthenia glaberrima</i>	Smooth goldfields	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Layia fremontii</i>	Fremont's tidytips	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Legenere limosa</i>	legenere	Vegetation	None	None	G2	S2	1B.1	High	Yes	Observed in 2015 by Ramona Robinson (HMS report 2015). However, the area where this was found was sold and is no longer owned or managed by the park.
<i>Lepidium nitidum var. nitidum</i>	Shining pepperwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>leucocephala</i>	White-headed navarretia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Limnanthes alba ssp. alba</i>	White meadow-foam	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Limnanthes douglasii ssp. striata</i>	Foothill meadowfoam	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Lomatium caruifolium</i>	Caraway leaved lomatium, Alkali parsnip	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Lupinus bicolor</i>	Dwarf lupine	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Lupinus nanus</i>	Sky lupine	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Malva parviflora</i>	Cheeseweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Malvella leprosa</i>	alkali mallow	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Marsilea vestita</i>	Hairy waterclover	Vegetation	None	None	None	None	None	N/A	Yes	Observed during the 2013 special-status plant survey
<i>Matricaria discoidea</i>	Pineapple weed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Micropus californicus var. californicus</i>	Slender cottonweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Microseris acuminata</i>	Sierra foothills silverpuffs	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Microseris douglasii</i>	Douglas' silverpuffs	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Minuartia californica</i>	California minuartia	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Montia fontana</i>	Water chickweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Navarretia eriocephala</i>	hoary navarretia	Vegetation	None	None	G4?	S4?	4.3	High	No	Suitable habitat present but have not observed within the park
<i>Navarretia intertexta</i>	Interwoven navarretia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Navarretia leucocephala ssp. leucocephala</i>	White-headed navarretia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Navarretia myersii ssp. myersii</i>	pincushion navarretia	Vegetation	None	None	G2T2	S2	1B.1	High	No	Suitable habitat present but have not observed within the park
<i>Navarretia pubescens</i>	Downy or purple pincusion	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Navarretia tagetina</i>	Navarretia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Orcuttia tenuis</i>	slender Orcutt grass	Vegetation	FT	SE	G2	S2	1B.1	High	No	Suitable habitat present but have not observed within the park
<i>Orcuttia viscida</i>	Sacramento Orcutt grass	Vegetation	FE	SE	G1	S1	1B.1	High	No	Suitable habitat present but have not observed within the park
<i>Packera layneae</i>	Layne's ragwort	Vegetation	FT	Rare	G2	S2	1B.2	Low	No	No supporting specialized habitats or soil types.
<i>Parentucellia viscosa</i>	Yellow parentucellia	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Phoradendron leucarpum ssp. tomentosum</i>	Mistletoe	Vegetation	None	None	None	None	None	High	Yes	Observed regularly as an incidental sighting
<i>Phyla nodiflora</i>	common lippie	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Pilularia americana</i>	American pillwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Pinus sabiniana</i>	Foothill pine, Bull pine	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Plagiobothrys austinae</i>	Rebecca austin's allocarya	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Plagiobothrys fulvus var. campestris</i>	Popcornflower	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plagiobothrys greenei</i>	Greene's popcorn flower	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plagiobothrys nothofulvus</i>	Rusty popcorn flower	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plagiobothrys stipitatus var. micranthus</i>	Stalked popcorn flower	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plantago erecta</i>	California plantain	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	CA Rare Plant Status	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Platanus racemosa</i>	Western sycamore	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Pleuropogon californicus</i>	Annual semaphore grass	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Poa secunda ssp. secunda</i>	Sandbert's bluegrass	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Pogogyne douglasii</i>	Douglas' mesamint, Douglas Beardstyle	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Pogogyne zizyphoroides</i>	Sacramento mesamint	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Populus fremontii ssp. fremontii</i>	Fremont's cottonwood	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Psilocarphus brevissimus var. brevissimus</i>	Dwarf woolly-heads	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Psilocarphus oregonus</i>	Oregon woolly-heads	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Quercus douglasii</i>	Blue oak	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Quercus lobata</i>	Valley oak	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	CA Rare Plant Status	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Quercus wislizenii</i>	Interior live oak	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Ranunculus aquatilis</i>	Whitewater crowfoot	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Ranunculus bonariensis var. trisepalus</i>	Vernal pool buttercup	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Ranunculus californicus</i>	California buttercup	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Ranunculus pusillus</i>	Low spearwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Rumex salicifolius</i>	Willow dock	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	Vegetation	None	None	G3	S3	1B.2	High	No	Suitable habitat present but have not observed within the park
<i>Salix exigua</i>	narrowleaf willow	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Salix gooddingii</i>	Black willow	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Salix laevigata</i>	Red willow	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Salix lasiolepis</i>	Arroyo willow	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Sambucus mexicana</i>	Blue elderberry	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Sanicula bipinnatifida</i>	Purple sanicle	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Sequoia sempervirens</i>	Coast redwood	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Sidalcea hartwegii</i>	Sidalcea	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Sidalcea hirsuta</i>	Hairy checkerbloom	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Stipa pulchra</i>	Purple needlegrass	Vegetation	None	None	None	None	None	N/A	Yes	Observed in 2019 as an incidental sighting
<i>Thysanocarpus radians</i>	Fringe pod	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Toxicodendron diversilobum</i>	Poison-oak	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Trichostema lanceolatum</i>	Vinegar weed	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Trifolium albopurpureum</i>	Rancheria clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Trifolium depauperatum</i>	Dwarf sack clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Trifolium microcephalum</i>	Smallhead clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Trifolium variegatum</i>	White-tip clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Trifolium willdenovii</i>	Tomcat clover	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Triglochin scilloides</i>	Flowering quillwort	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Triphysaria eriantha ssp. eriantha</i>	Butter and eggs	Vegetation	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Triteleia hyacinthina</i>	White brodiaea	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Triteleia laxa</i>	Itherial's spear	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Typha latifolia</i>	Broad leaf cattail	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Uropappus lindleyi</i>	Silver puffs	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Veronica peregrina ssp. xalapensis</i>	Purslane speedwell, Speedwell, neckweed	Vegetation	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Wyethia angustifolia</i>	Narrow-leaved mule's ear	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Wyethia bolanderi</i>	Bolander's mule ears	Vegetation	None	None	None	None	None	N/A	Yes	Observed in 2019 as an incidental sighting
<i>Wyethia reticulata</i>	El Dorado County mule ears	Vegetation	None	None	G2	S2	1B.2	Low	No	No supporting specialized habitats or soil types.
<i>Xanthium strumarium</i>	Cockleburr	Vegetation	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Yabea microcarpa</i>	False hedge-parsley	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Zeltnera muehlenbergii</i>	Muehlenberg's centaury	Vegetation	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Aegilops triuncialis</i>	Barbed goatgrass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Ailanthus altissima</i>	Tree of Heaven	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed in 2021 as an incidental sighting
<i>Aira caryophylla</i>	Silver Hairgrass, Shivergrass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Anthriscus caucalis</i>	Bur chervil	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Avena barbata</i>	Slender wild oats	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Avena fatua</i>	Wild oat	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Brachypodium distachyon</i>	Purple false brome	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Brassica nigra</i>	Black mustard	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Brassica rapa</i>	Field mustard	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Briza maxima</i>	Quaking grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Briza minor</i>	Little quaking grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Bromus diandrus</i>	Ripgut brome	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Bromus hordeaceus</i>	Soft chess brome	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Bromus madritensis ssp. rubens</i>	Red brome	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Capsella bursa-pastoris</i>	Shepherd's purse	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Carduus pycnocephalus</i>	Italian thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Centaurea solstitialis</i>	Yellow star-thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Cerastium glomeratum</i>	Chickweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Chondrilla juncea</i>	Skeleton weed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed in 2014 by Romana Robinson
<i>Cirsium vulgare</i>	Bull thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed regularly within the park as an incidental sighting
<i>Convolvulus arvensis</i>	Field bindweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Dipsacus fullonum</i>	Fuller's teasel	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Dittrichia graveolens</i>	Stinkwort	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Elymus caput-medusae</i>	Medusahead	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Erigeron sumatrensis</i>	Tropical horseweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed in 2017 as an incidental sighting
<i>Erodium botrys</i>	Broad leaf filaree	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Erodium cicutarium</i>	Red stem filaree	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Erodium moschatum</i>	White stem Filaree	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Festuca bromoides</i>	Brome fescue	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Festuca myuros</i>	Rat-tail fescue, Rattail sixweeks grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Festuca perennis</i>	Italian ryegrass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Galium parisiense</i>	Wall Bedstraw	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Gastridium phleoides</i>	Nit grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Geranium dissectum</i>	Cut leaved geranium	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Glyceria declinata</i>	Waxy mannagrass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Helminthotheca echioides</i>	Bristly ox-tongue	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hirschfeldia incana</i>	Perennial field mustard	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hordeum marinum ssp. gussoneanum</i>	Seaside barley	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hordeum murinum</i>	Hare barley	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hypericum perforatum</i>	Klamath weed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Hypochaeris glabra</i>	Smooth cat's ear	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Hypochaeris radicata</i>	Hairy cats's ear	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Juncus capitatus</i>	Capitate rush	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Lactuca saligna</i>	willow lettuce	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Lactuca serriola</i>	Prickly lettuce	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Lathyrus angulatus</i>	Angled pea vine	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Ramona Robinson in 2011
<i>Lathyrus angulatus</i>	Lathyrus	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Lathyrus cicera</i>	Red peavine	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Lathyrus hirsutus</i>	Caley pea	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Leontodon saxatilis</i>	Hawkbit	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Leontodon taraxacoides</i>	False dandelion	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Lepidium didymum</i>	Lesser swine cress	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Linum bienne</i>	Narrowleaf flax, Pale flax	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Logfia gallica</i>	Narrowleaf cottonrose	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé

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<i>Lysimachia arvensis</i>	Scarlet yellow loosestrife	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Lysimachia minima</i>	Chaffweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Medicago polymorpha</i>	Bur clover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Melilotus indicus</i>	Yellow sweetclover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Melilotus officinalis</i>	Yellow sweet clover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Mentha pulegium</i>	Pennyroyal	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Petrorhagia prolifera</i>	Pink grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Phalaris aquatica</i>	Harding grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plantago coronopus</i>	Cutleaf plantain	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Plantago lanceolata</i>	English plantain	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

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<i>Plantago major</i>	Common plantain	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Plantago virginica</i>	Plantain	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Poa annua</i>	Annual bluegrass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Polygonum aviculare ssp. depressum</i>	prostrate knotweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Polypogon monspeliensis</i>	Rabbit's foot grass, Annual beard grass	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Psilocarphus tenellus</i>	Slender woolly-heads	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2014 vernal pool relevé survey
<i>Ranunculus muricatus</i>	Spiny-fruit buttercup	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Raphanus raphanistrum</i>	Jointed charlock	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Raphanus sativus</i>	Wild radish	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Rorippa curvisiliqua</i>	Curvepod yellowcress	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

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<i>Rubus armeniacus</i>	Himalaya blackberry	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Rumex acetosella</i>	Garden sorrel	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Rumex conglomeratus</i>	Clustered dock	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Rumex crispus</i>	Curly dock	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Senecio vulgaris</i>	Old man of the spring	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Sherardia arvensis</i>	Field madder	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Silene gallica</i>	Common catch-fly	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Silybum marianum</i>	Milk thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Soliva sessilis</i>	Soliva	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Sonchus asper</i>	Spiny leaf sow thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	CA Rare Plant Status	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Sonchus oleraceus</i>	Sow thistle	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Spergularia bocconeii</i>	Boccon's sand-spurrey	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed during 2013 rare plant surveys
<i>Spergularia rubra</i>	Common sandspurry	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Stellaria media</i>	Common chickweed	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Torilis arvensis</i>	Sock Destroyer, Field hedgeparsley	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed regularly throughout the park as an incidental sighting
<i>Tragopogon porrifolius</i>	Oyster Plant, Salsify	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed in 2019 as an incidental sighting
<i>Trifolium campestre</i>	Hop clover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Trifolium dubium</i>	Shamrock	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Trifolium hirtum</i>	Rose clover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Trifolium incarnatum</i>	Crimson clover	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey
<i>Vicia benghalensis</i>	Purple vetch	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment

Scientific Name	Common Name	Taxon Group	Fed Status	CA Status	Global Rank	State Rank	CA Rare Plant Status	Potential to Occur within SVRA	Known to Occur within SVRA	Justification
<i>Vicia sativa</i>	Garden vetch	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Vicia villosa ssp. varia</i>	smooth vetch	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by MIG during 2018 Ehnisz Biological Assessment
<i>Vicia villosa ssp. villosa</i>	Hairy vetch	Vegetation, Non-native	None	None	None	None	None	N/A	Yes	Observed by Leah Gardner during 2020 pre prescribed burn relevé
<i>Morus alba</i>	Fruitless mulberry	Vegetation, Ornamental	None	None	None	None	None	N/A	Yes	Recorded by Parus Consulting during the 2013 Biological Assessment for the General Plan and EIR
<i>Pistacia chinensis</i>	Chinese pistachio	Vegetation, Ornamental	None	None	None	None	None	N/A	Yes	Observed by MIG during 2016 wetland delineation survey

Status Key:

Federal (USFWS)

FE: Federally-listed Endangered

FT: Federally-listed Threatened

FD: Federally-delisted

FC: Candidate federal listing

State

SE: State-listed Endangered

ST: State-listed Threatened

SCE: State Candidate Endangered

SSC: State Species of Special Concern

CFP: California Fully Protected Species

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: 2013 special-status plant survey, 2013 Prairie City SVRA Biological Resources Assessment, 2015 Prescribed burn relevé survey, 2015 PCSVRA HMS report, 2020 wetland delineations, 2020 Prescribed burn relevé survey, 2021 Ehnisz General Biological Assessment, 2021 VegCamp surveys, incidental sightings

10 APPENDIX 2: FIELD ASSESSMENT METHODOLOGY TO SUPPORT THE WILDLIFE AND PLANT INVENTORY

The Prairie City SVRA Natural Resource Assessment is based upon the best available knowledge and review of multiple sources or types of information. It acknowledges bias and information gaps that may be present in these field assessments discussed below.

2013 Biological Resource Assessment

Methods

Two biologists from Parus Consulting Inc. conducted a reconnaissance-level field survey using transects in 2013 to support the 2016 General Plan and EIR (CDPR 2013b). No additional details about the transect methodology were provided. All observed fauna and flora were recorded and identified to the lowest possible taxon; these taxa were added to a list combined from previous studies within the park. Survey efforts emphasized special-status species and their associated habitat with documented occurrences within five miles of Prairie City SVRA. The locations of any special-status species or their respective habitats were georeferenced with Global Positioning System (GPS) receivers.

Uncertainties and bias

During the field survey, no special-status plant or wildlife species were detected. The field survey was not intended to be a protocol-level survey for any sensitive plant or wildlife species. Therefore, species that are hard to detect due to enigmatic behaviors, have nocturnal life histories, or are only identifiable during a specific season may not have been identified. The biological resource assessment was a presence-only survey and meant to geographically cover the whole park but was conducted prior to acquiring the Ehnisz and Barton properties.

2021 General Biological Resource Assessment of the Ehnisz Property

Methods

MIG consultants conducted field surveys of the Ehnisz property on foot in 2016 and 2018 (CDPR 2021b). They recorded all observed plant and wildlife species, characterized vegetation communities and associated wildlife habitats, and evaluated potential habitats for special-status species. Protocol-level surveys were not conducted for any special-status wildlife. No other methodology was recorded for field surveys.

MIG also conducted a rare plant survey during the May 2018 field visits. To accurately document the presence/absence of special-status plants, the surveys were conducted during the peak blooming period of all species with the potential to occur within the habitats found within the Study Area. These surveys were conducted according to CNPS (2001), CDFW (2018c), and USFWS (2002) protocols. Site coverage consisted of slowly walking along parallel transects to allow accurate identification of plants.

Uncertainties and bias

The biological resource assessment presence-only survey was meant to cover just the Ehnisz property and not the whole park. The field survey was not intended to be a protocol-level survey for sensitive wildlife species. Therefore, species that are hard to detect due to enigmatic behaviors, have nocturnal life histories, or are only identifiable during a specific season may not have been identified.

HMS Monitoring Methodology – Avian Point Counts

Methods

Forty-three random points, each with a 250-foot buffer, were established over the last 11 years using the ArcMap random points generator tool. Points were located in the field using ArcGIS software and were permanently marked on the ground with the placement of green Carsonite® markers (Figure 35). Surveys were conducted for each point twice in the winter and twice in the spring, for a total of four-point count surveys per year.

Prairie City SVRA Avian Survey Sites

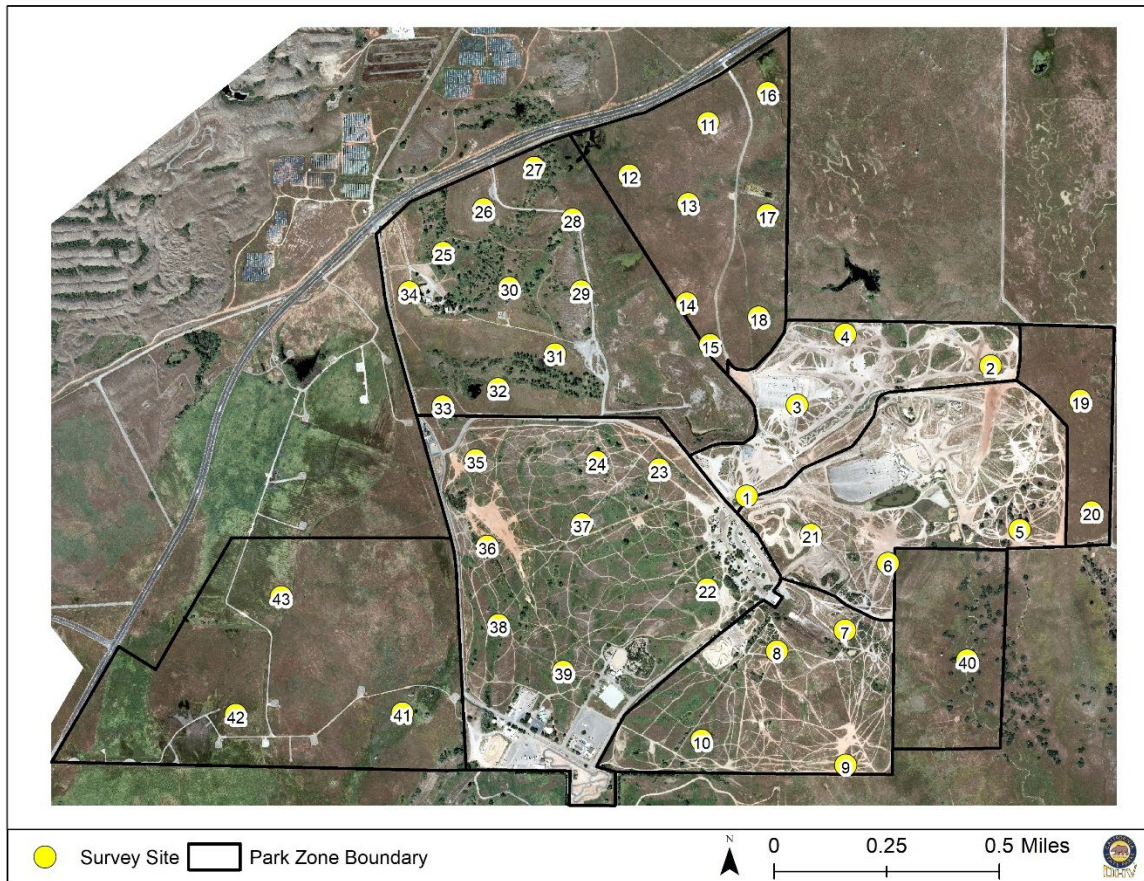


Figure 35. Locations of avian point counts at Prairie City SVRA.

A bird observer and one data recorder entered the point count location following the USDA Forest Service bird point count protocols (Ralph et al. 1995). The bird team took a minute before collecting data to gather tools and lessen the flushing impact of their movements. The data recorder then started a stopwatch set with a seven-minute time interval, and the bird observer began calling out the identities of all birds that they could hear or see. No distance limit for observation was used. Data was recorded on species, the number of individuals, habitat type, distance from the viewer, wind speed, temperature, general weather condition (i.e., cloudy, clear), rangefinder usage, date, time, and incidental species. Once that data point was recorded, the team moved to the next location. Surveys were stopped at noon or when there were no more data points to collect, whichever came first.

All avian survey data was entered into a Microsoft Access Database under a table called "Bird Database 2017Final" using a custom-programmed form called "Bird Site Conditions" with "Bird Sightings" as a subform. The data entered into the form was automatically organized into tabular form, queried, and exported into Microsoft Excel spreadsheet documents. Statistical analysis was completed within Excel.

Statistical significance was determined using a two-sample t-test with a 5% significance level ($\alpha = 0.05$). A two-sample t-test is used to determine if the means of two populations are equal. A 5% significance level means there is a 5% probability of concluding that a significant difference exists between the means when there is no difference. An annual comparison of diversity was completed for the whole park and comparing the avian diversity between riding and non-riding areas of the park.

The purpose was to research the effects of OHV-use on bird populations by estimating diversity and richness using annual point counts at stationary, randomly chosen points distributed across all habitat types within the park. If there was a significant (95% confidence interval) decrease in avian diversity in zones of the park as measured by the Shannon Diversity Index utilizing an annual comparison, that would trigger a management action under the 2014 Prairie City SVRA WHPP. This objective and trigger were derived from the past statutorily required PRC to maintain viable species composition.

Uncertainties and bias

Possible errors included inconsistent data collection such as distance rounding, possible double-counting, and misidentification by non-expert birders. There was also no analysis of detection probability. Depending on the error, bird diversity and richness could have been over or underestimated.

Audio Recording Units (ARUs) Bird Monitoring Methodology –by Institute of Bird Population and Audubon

Methods

Institute of Bird Population (IBP) designed and built a tripod system and provided Prairie City SVRA staff with tripods to transport to each HMS point. IBP also produced and provided a sampling protocol detailing the process required to collect and archive recordings using the equipment provided.

Park staff were instructed to audibly announce the beginning and end of the survey to the ARU and stand a sufficient distance away from the units so ARUs would not pick up anthropogenic noise (i.e., papers rustling, pen scraping). The units were left to record at each HMS location for the duration of the park's standard in-person survey (7 minutes) and then transported to the next location within the park. Staff was given the choice of conducting their in-person bird survey alongside the ARUs.

Recordings collected from both the Audiomoth and SM4 units (different types of ARUs) at each park are currently being annotated by a team of skilled annotators. Recordings will also be processed by the BirdNET software to determine if the ARU model has a significant effect on the effectiveness of BirdNET to detect and identify bird species correctly. Observed species richness for the two ARU units derived from human annotation and BirdNET annotation and compared. IBP also searches for patterns in bird species detected at a lower rate by the Audiomoth versus the SM4. The devices can also record OHV activity surrounding HMS points, which provides another measure of potential disturbance.

Uncertainties and bias

The ARUs cannot detect birds that do not frequently vocalize, such as turkey vultures and many raptors, and do not entirely replace in-person surveys. The combined use of ARUs and field surveyors increases the detection probability of non-vocalizing species.

Trials with the ARUs determined that long-term stations (>4hrs) were needed to approach human-like performance (CDPR 2019f). The bird monitoring in Section 5.4 builds off this knowledge.

HMS Monitoring Methodology – Small mammals Sherman Traps 2014

Methods

A single overnight trapping session was completed in 2014. Sherman trapping was used at Prairie City SVRA following the transect protocol developed by Pearson and Ruggiero (Pearson and Ruggiero 2003). On March 25, 2014, twenty Sherman traps were placed 10 meters apart along a transect moving west to east. This transect was in the coyote brush habitat in Zone 2 of Prairie City SVRA. Sherman traps were baited with peanut butter, birdseed, and a cotton ball bed to provide warmth through the night. Traps had a 40% success rate, with eight traps containing deer mice, and morphological data were collected, including ear size, leg length, and tail length.

Uncertainties and bias

This survey was not intended as a comprehensive survey for small mammals and only included one trapping night in one habitat type. Comprehensive Surveys have not been completed since 2010 (CDPR 2014b).

Large Branchiopod Monitoring Methodology – ECORP Survey 2016, 2017

Methods

Survey methods closely followed the "wet season survey" protocols outlined in the 2015 [USFWS Survey Guidelines for the Listed Large Branchiopods](#), with the exception that only selected potentially suitable habitat was surveyed. Potential federally listed large branchiopod habitat was selected for surveying based on habitat quality and extent of inundation at the survey time. Forty features suitable as habitat for federally listed large branchiopods (e.g., vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardii*]) were surveyed in 2016, and 88 features were surveyed in 2017 (Figures 36 -40). Permitted ECORP Consulting, Inc biologist Clay DeLong conducted the wet season assessment-level survey on March 21, 2016, April 11, 2016, February 24 and 28, 2017, and March 6, 2017 (ECORP 2016 and 2017).

Habitats surveyed within Prairie City SVRA were visually inspected and/or dip-netted during the site visits. Representative portions of each feature's bottom, edges, and vertical water column were sampled using a dip net with a 500-micron mesh size and in accordance with the Guidelines (USFWS 2015). Required data were collected and documented on data sheets comparable to the datasheet provided in Appendix 1 of the Guidelines (USFWS 2015). If large branchiopods were observed, an estimate was made of the number of

individuals by order of magnitude (e.g., ones, tens, hundreds, thousands) per feature. In addition, other aquatic invertebrates and vertebrate species observed during sampling were recorded. These species were identified to the lowest known taxa.

Figure 36. 2016 large branchiopod assessment results. This content has been removed from the public document.

Figure 37. 2017 large branchiopod assessment results, part 1. This content has been removed from the public document.

Figure 38. 2017 large branchiopod assessment results, part 2. This content has been removed from the public document.

Figure 39. 2017 large branchiopod assessment results, part 3. This content has been removed from the public document.

Figure 40. 2017 large branchiopod assessment results, part 4. This content has been removed from the public document.

Uncertainties and bias

Since the purpose of both surveys was to determine the presence of large branchiopods, there was a bias towards large branchiopods over other invertebrates. Other taxon and groups were noted for presence, but not to species level. Also, only select wetland features were surveyed, and the methodology noted features were selected by habitat quality and inundation at the time of the survey. The methodology did not detail how habitat quality was determined or the measurement of the required depth of inundation. At the time, it was found that some wetlands and vernal pools were also mapped incorrectly. Overall, this survey was completed with the best available knowledge and methodology at the time but was not a comprehensive, protocol-level survey of the entire park.

2015 Vernal Pool Prescribed burn Relevé Survey

Methods

Data collection methodology followed the [California Native Plant Society's relevé protocol](#). Twenty-two plots were randomly assessed within the 176-acre burn site (Vernal Pool Management Unit). Field data was collected with the help of State Parks Botanist Ramona Robison.

Eight were selected in upland grassland areas, and 14 were selected in vernal pools (Figure 41). Data were collected on the vegetative cover (percent of total) for each species identified within a plot. Analysis for this study focused on all elements of the Shannon-Wiener diversity index (H), including species richness (S) and species evenness (E). Species richness refers to the number of species found in each plot. The Shannon-Wiener diversity index expands on species richness by accounting for the relative abundance or evenness (E) of the different species in a survey plot. Species evenness (E) is the relative abundance of each species and is

calculated as $E = H/\ln(S)$, with values falling between 0 and 1. The Shannon-Wiener index is calculated as $H = -\sum Pi(\ln Pi)$, where Pi stands for the proportion (i.e., relative abundance) of each species compared to the total value of all species. The value of the Shannon-Wiener index increases both when the number of species (S) increases and when species evenness (E) increases. The index value is maximized when all species are equally abundant, and the index can range from 0 to 4.6. Significance testing was determined using the mean results at 95% confidence. Calculations were completed using Microsoft Excel functions.

Prairie City SVRA 2011/2014 Relevé Survey Points

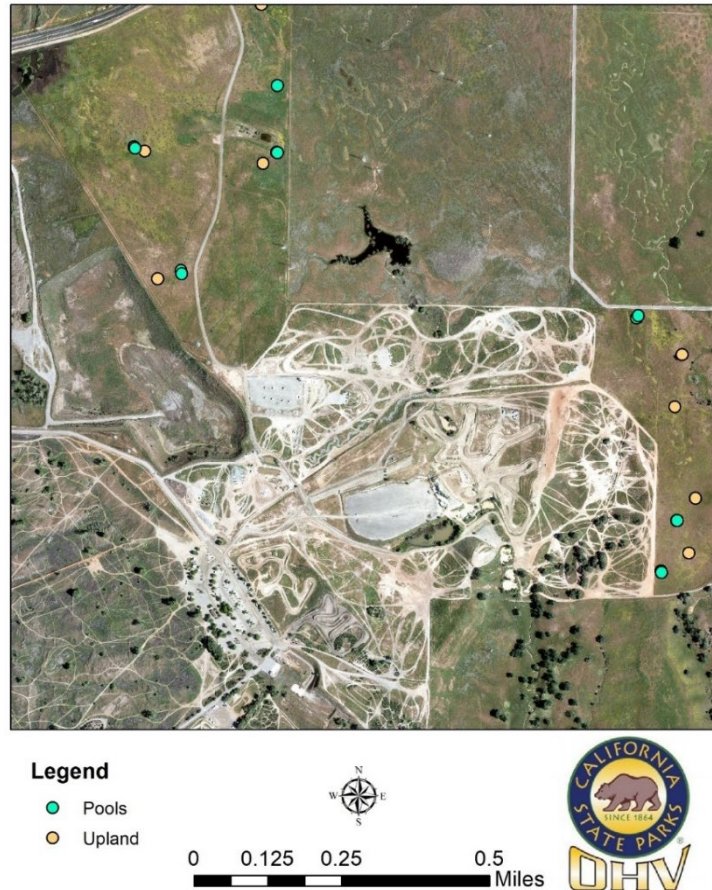


Figure 41. Locations of 2014 relevé survey points.

Uncertainties and bias

Following CNPS protocol, the plots were selected as best representations of the vegetation stands to be studied rather than randomly selected. There were more plots within pools than upland grassland areas, and five pools had two plots within the same pool, which means the points were not independent of each other and violates the assumption of a paired t-test. It could lead to overestimating species abundance in pools if individuals were double counted.

11 APPENDIX 3: MANAGEMENT ACTION DETAILS

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

Management Actions related to ongoing natural resource and maintenance activities

- Prevent unauthorized trail development and rehabilitate or restore occurrences - new unauthorized trail development can be detected during biennial GIS-based vegetation cover assessment, special event monitoring, or incidental sightings during day-to-day work. These trails will be barricaded, signed, restored to the original line and grade, and seeded with native grass seed mix sourced from an appropriate local source. Older existing user-created trails may be rehabilitated or restored on a project-level basis or through small annual restoration programs. Unauthorized trail development may be prevented by providing engaging trails, installing permanent barricades such as cross-fencing, native plantings, or rocks, or enforcing an area closure if off-trail riding is detected within a Route and Trail System Use area. Preventing new unauthorized trail development and resulting damage to native vegetation will aid in conserving existing native vegetation communities.
- Removal of invasive plant species using mechanical removal, chemical treatments, and/or prescribed burning.
 - Implement Prescribed Burn Program in partnership with CalFire – Prairie City SVRA holds a 10-year Vegetation Management Plan agreement (Rx-North-049-AEU.00) with CalFire since 2019 for prescribed burns within grassland areas throughout the park, mainly focusing within the Vernal Pool MU. In 2020, a Notice of Exemption (CEQA# 13075) was issued for the prescribed burn plan within the Vernal Pool MU. Additional CEQA will need to be completed before burning can be prescribed in areas outside the Vernal Pool MU. Surveys for nesting birds and special-status species will be completed before each burn. Construction of prescribed fire containment lines would be designed to avoid direct and indirect impacts to vernal pools.
 - Remove *Elymus caput-medusae* ("medusahead") thatch within the Vernal Pool MU– this would be achieved through a prescribed burn or other treatment determined through widespread invasive plant monitoring.
 - Annually survey and treat invasive populations bordering the Vernal Pool MU (4.78 miles including on either side of the road going through subunit A) to prevent and reduce encroachment through 2026. If chemical treatment is used that may impact vernal pools, a wetland friendly product would be utilized to protect vernal pool habitats.
 - Annually survey and treat invasive populations within Zone 2/3 MU and Zone 4 MU designated restoration areas (2.2 miles around Oak Hill, the Whale, and Coyote Gulch restoration areas) to prevent and reduce encroachment through 2026.

- On-going timed mowing and herbicide application – along main entrance roads and within staging areas.
 - Develop an Invasive Plant Management Plan – an IPM is a strategic, integrative, and adaptive plan for managing existing invasive plant infestations and proactive monitoring for new populations of invasive plants within the park. It will include specific goals and objectives, management actions, and monitoring programs with some repetitive information from the WHPP. It will also look at identifying ways to reduce chemical application to the landscape including methods such as grazing if applicable.
- Annual mowing as part of preparations for the Hangtown Motocross Classic. The Hangtown Motocross Classic occurs annually at the park and applies for a Special Event Permit for each occurrence. Prior to the event, roughly 50 acres of grasses, almost entirely non-native, are mowed to reduce the fire hazards from dry fuels within parking areas in Zone 1 MU, Zone 2/3 MU, Zone 4 MU, and PCMX MU. Parking and mowing locations are reviewed by staff for resource impacts prior to mowing.
 - Continue annual restoration and rehabilitation program – every year, Prairie City SVRA plans a restoration or rehabilitation project in an area shifting to a Route and Trail System Use Area. The focus would be on areas or trails with excessive erosion or increasing habitat fragment size. A native seed mix will be used and sourced from the Central Valley or other appropriate local source.
 - Target Zone 2/3 MU or Zone 4 MU in the annual rehab program
 - Continue and expand plant propagation program – Planting additional native plants in recently completed route and trail system areas to increase habitat complexity in appropriate areas. This would promote insect/rodent prey and enhance structural and ecological diversity. Planning will include opportunities for creating hedgerows along fence lines or blocks around buildings using native pollinator or fruit bearing plants to enhance habitat value.
 - Continue acorn propagation program with student interns
 - Expand acorn propagation program to include Native American Partners
 - Work with Interpretation staff to increase visitors' knowledge and understanding of natural resource-related concepts and projects – Collaboration with interpretation staff on interpretation panels and programs, articles for the website, social media, and park programs during events.
 - 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 BMPs may include:
 - removing trash and debris from natural areas,

- ensuring equipment and parking areas are located away from sensitive and aquatic resources,
 - minimizing discharge of sediment to offsite aquatic features and onsite vernal pools and
 - conducting annual wildlife awareness training for staff before trimming or pruning vegetation, mowing, washing buildings, or grooming roads and trails.
 - Resource staff may also conduct nesting bird surveys no earlier than 7 days prior to this work during the breeding season. Buffers would be created for any active nest found.
 - adding barriers to open pipes such as vents on buildings,
 - leaving snags or downed trees in natural areas unless they are a hazard to staff or visitors,
 - Report all observed bird mortalities and injuries to natural resource staff, and they may report to West Nile Virus Hotline if applicable
 - Remove standing water wherever possible to reduce mosquitos and spread of West Nile Virus
 - Maintain erosion control BMPs during and after construction
 - When mowing is necessary, mow from the center out allowing wildlife present a chance to escape.
- Monitoring and maintenance related to the soil conservation plan such as track and trail monitoring and repair (See Section 4 and 5 of the Soil Conservation Plan)
 - Fence and water line repair

Management Actions related to one-time landscape conservation and improvement projects

Project 1: Yost/Ehnisz MU RTMP Project: The Yost/Ehnisz MU is designated a Route and Trail System Use Area in the General Plan and is currently not open to riding. Details for this project are unknown and will need to go through public review and CEQA. However, as there are many sensitive resources within the area, Prairie City SVRA plans to incorporate resource conservation using "buffer areas" that will be excluded from OHV use (Figure 42). Trail design and use will be coordinated through the RTMP within designated project footprints outside the buffer area for resource conservation. All the cottonwood forests will be conserved within the project footprints (41 acres). The remaining three acres of cottonwood forests are within an easement on Ehnisz that is outside the park's control and therefore is excluded from the target conservation acreage. Water features will also be avoided.

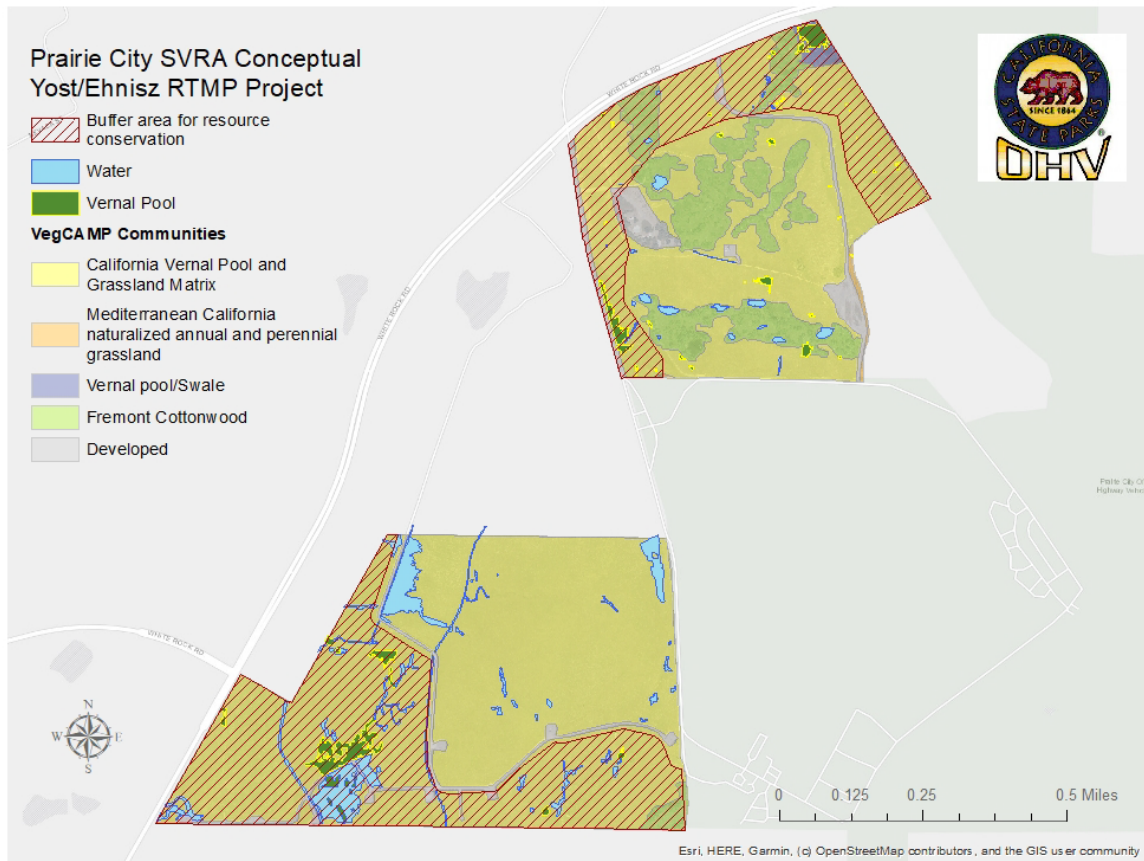


Figure 42. Conceptual Planning for the Yost/Ehnisz MU RTMP Project.

Project 2: Coyote Gulch Project: This project is part of a Major Capital Outlay project headed by the Northern Service Center to design and develop Best Management Practices (BMPs) to remove sediment and improve water quality within the Prairie City SVRA and to protect downstream receiving waters. In 2016, the planning effort focused on the main drainages running through Zone 4 MU, PCMX MU, Zone 2/3 MU, and Barton M. However, in 2018, the focus shifted to just the Coyote Gulch area of Zone 2/3 MU. Coyote Gulch is about 43 acres of 236 in Zone 2/3 MU and is concave bowl shape with one ephemeral drainage (Figure 43). Heavily eroded user-created trails, numerous unprotected watercourse crossings, and natural bowl-shaped topography made this area a priority for restoration.



Figure 43. Coyote Gulch Project Boundary

The trails and hillsides will be restored to a "clean slate" - recontoured to the original line and grade and hydroseeded with a native seed mix. A few existing routes will remain for access during maintenance. The channel will be contoured into a twelve-foot-wide vegetated swale with five raised box culvert crossings strategically placed along the stream (Figure 44). The sediment basin will be removed. Trail design and use will be handled separately through the Route and Trail Management Plan and avoid impact to oak resources. A notice of determination was filed in December 2019 tiered to the General Plan. The Northern Service Center has received a 1602 Lake and Streambed Alteration Agreement (SAC-17340-R2), a 401 Water Board Notice of Applicability for coverage under Small Habitat Restoration Projects (#5a34CR00823) currently waiting on approval for the 404 permit. Once all permits are approved and received, construction is anticipated to start in the summer of 2022. Discussions have started on planning a future, large crossing along the drainage beneath the Teichert Conveyor belt easement to allow for access to Barton MU for maintenance/monitoring needs as well as for wildlife crossing.

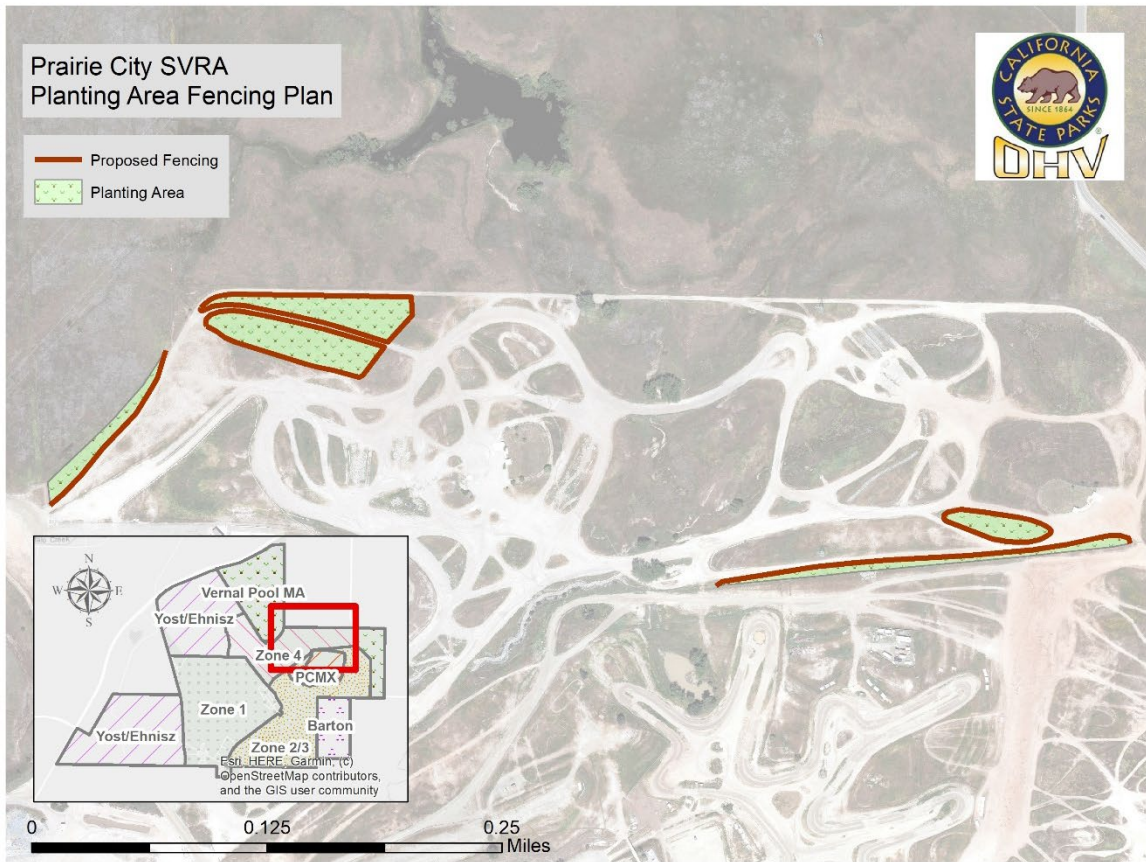


Figure 45. Conceptual Fencing Plan to Protect Native Plants in Zone 4 MU.

Project 4: Goose Pond Stormwater Improvement Project: The purpose of the Goose Pond Stormwater Improvement Project is to prevent ponding at the service entrance to the Oak Hill Trail system and between Bobcat and Rattlesnake Trails (Figure 46).

Every year during the rainy season, this area backs up and holds a large amount of ponded water. With a significant rain event, the water can flow over the road causing excessive erosion and posing a safety hazard to staff and the public crossing the deep water. Once Goose Pond reaches its holding capacity, the water breaches the pond's bank and begins to flood the wetland area at the west end, which ultimately backs up over the road to combine with the ponding at the toe of Oak Hill.

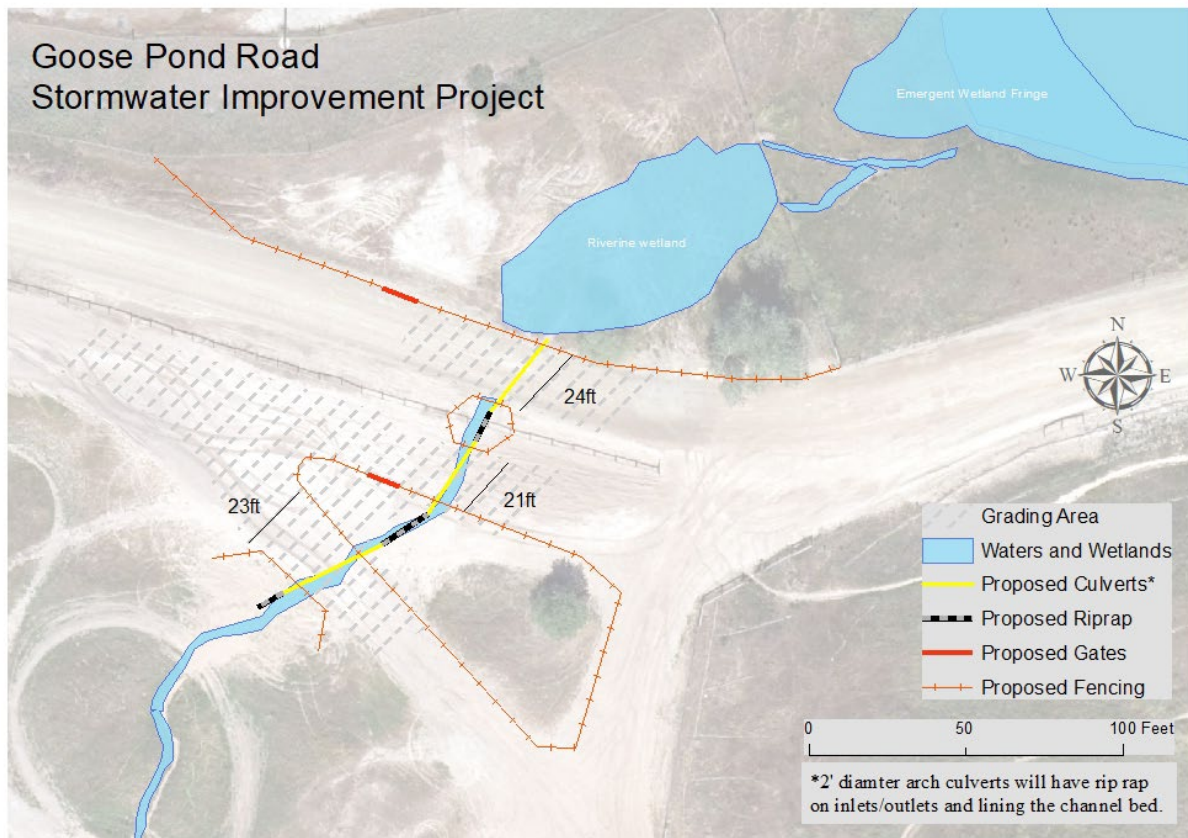


Figure 46. Goose Pond Stormwater Improvement Project conceptual design

This project will replace the non-functional culvert within the footprint of the road with a 2' arch culvert and add two new 2' arch culverts upstream. Each culvert's inlets, outlets, and beds will be armored with riprap. Approximately .2 acres will be recontoured to bring the road tread up over the proposed culverts using a dozer. Sediment will be compacted onto the trail's tread surface, also using a dozer. The overflow culvert within Goose Pond will have a 6" x 12" notch cut below the top edge to reduce the pond's holding capacity. This culvert will allow stormwater to run through the wetland and into Goose Pond without backing up and flooding the road. Fencing will be added to protect the wetland area and the culvert inlets and outlets. Access to enclosed areas will be maintained by 10ft gates.

The project occurs in an ephemeral stream and will convert 116 feet of the stream bed to riprap. One hundred feet of the stream bed is disturbed since it makes up two trails without a hardened or raised crossing. Adding the arched culverts and raising the road will eliminate the direct tire-to-water contact and associated mechanical erosion, improving water quality. Armoring the culvert inlets, outlets, and culvert bed will further trap sediment and slow water down before reaching the wetland area. The project will also eliminate off-trail riding within the riverine wetland by fencing off previously 0.3 acres of ridden area which will allow the riparian vegetation to grow naturally in the area or provide a place to plant additional wetland or riparian species.

Construction will occur when the channel is dry and will take place over several weeks. BMPs will be used to manage fugitive dust and erosion. An estimated 200sqf of non-native and invasive grasses may be impacted when grading to build the roads. Any exposed soils at the end of construction will be seeded with native grass, and the fenced enclosed areas will naturally fill with grasses, so there will be a positive impact on vegetation. Any permits needed will be acquired before the start of construction.

Excluding wetlands: A few known water features are currently accessible to OHV use through inherited user-created trails in Zone 1 MU and Zone 2/3 MU. This project will exclude OHV access from these features during the wet season by installing fences and gates for access during the dry period. The water features and fence lines will be monitored regularly for trespass or maintenance need respectively as an on-going natural resource and maintenance activity.

Management Actions related to Policy and Regulation compliance

- Develop a Soil Conservation Plan (SCP) by 2022.
- Implement SCP by fall of 2022
- Conduct required project impact evaluations and monitoring and implement best management practices to ensure compliance with project permits, management plans, 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.
- Enforce a 20-ft exclusion buffer around elderberries (*Sambucus* species).
- Require pre- and post-special event monitoring – Part of the special event application includes Exhibit B: Resource Protection Conditions, which the permittee must agree to before the event. Conditions include vegetation protection by requiring the route to stay on trails and outside a 20ft buffer of elderberries, dust suppression requirements, avoidance of unapproved water crossings, and trash removal, to name a few examples.
- Redirect special event routes if impacts occur – Resource staff can adjust the course layout during the event or pre-event monitoring to avoid impacts to natural resources.
- 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.

- Sound monitoring – two sound monitors within the park continuously monitor ambient noise levels and noise generated within the park. Twice a year, consultants calibrate this sound monitoring with in-person readings. The sound level can then be extrapolated to areas of sensitive receptors outside the park to monitor noise compliance.
- Wet weather closures – certain park areas are closed due to poor trail conditions during the rainy season to prevent excessive erosion and water quality problems. More details can be found in the SCP.

12 APPENDIX 4: MONITORING METHODOLOGY

The Prairie City SVRA Monitoring Program is clearly defined and based on WHPP goals and objectives. It provides quantitative performance indicators composed of clearly defined metrics, baselines, and achievable targets. The discussion below details the baseline, methods, and uncertainties of these monitoring efforts.

GIS-Based Vegetation Cover Assessment

Baseline

The 2020 analysis concluded the park contains a total of 1071 acres of vegetated cover (CDPR 2021g). Of that, 973 acres are located outside of regularly maintained and operated facility areas. Table 7 further breaks down acres within Management Units.

*Table 7. Vegetation Cover within Management Units. *Represents existing riding areas.*

Management Unit	Acres of Vegetation	Acres of Vegetation outside facilities	Total Acres of Unit	Percent Cover
Park Total	1073	973	1343	80%
Zone 1 MU*	203	189	280	73%
Zone 2/3 MU*	150	131	236	64%
Zone 4 MU*	87	40	137	64%
Yost/Ehnisz MU	381	375	403	95%
Barton MU	66	66	67	99%
Vernal Pool MU	169	169	176	96%
PCMX MU*	17	3	43	40%

In 2020, a ground survey was completed in conjunction with the aerial imagery to compare the GIS-based model created with the ArcMap NDVI tool to the observed cover on the ground. Fourteen 1m² quadrats were selected throughout the park to survey vegetation cover using visual estimation along defined vegetation edges like roads or within sparse vegetation. The northwest corner of each quadrat was mapped using Collector, and the north edge was aligned, so the northeast corner pointed directly east. Matching polygons were drawn on ArcMap to compare to the NDVI model. A chi-square analysis was performed using the observed (actual) and estimated (NDVI) data. The NDVI generated model was not a great fit for the observed

data (p= 0.0). Some estimates are much higher than the actual cover, and some are much lower, and trying to find middle ground just overcorrected in a different area.

In the future (2022), an equal number of random points along with edge samples or double the sample size could be surveyed. In the future, a grid within the quadrants matching the image resolution could be added, and each grid rounded up or down to a 50% threshold. Also, the medusahead thatch cover could be estimated during the ground survey. The model would pick that up as dead plant material, and it wouldn't be isolated from the bare dirt category.

Two recently completed restoration and improvement projects contributed greatly to increasing vegetation cover and were analyzed using this GIS-based tool: Oak Hill Project and the Whale Project (CDPR 2021e, CDPR 2021f, respectively). The Oak Hill Project restored a 9-acre area with 36% cover in 2016 to 96% cover in 2018 while preserving high-quality recreation opportunities. The Whale Project restored a 6.5-acre area with 46% cover in 2018 to 65% cover in 2020. This analysis will be repeated to measure the success of future restoration projects and will be included in the annual report.

Methods

NDVI analyzes are performed using ArcMap 10.8 to measure the annual change in vegetation cover using aerial imagery flown every two years. NDVI stands for normalized difference vegetation index, which measures the amount of near-infrared (NIR) light versus red light reflected from the earth's surface. The equation is:

$$\text{NDVI} = (\text{NIR}-\text{Red})/(\text{NIR}+\text{Red})$$

An NDVI value is close to one micrometer indicates a greener, healthier plant. Zero indicates no vegetation and a negative value, water or buildings. All aerial imagery is analyzed with the NDVI tool in the Imagery Analysis window.

The NDVI raster results are then classified into two classes - vegetation and non-vegetation - first using the Natural Breaks (Jenks) method and then adjusting by hand until the outcome matches each year's aerial image. New raster datasets are generated using these thresholds and the raster calculator. Polygons are created from these raster datasets to calculate areas of vegetation and no vegetation. Facility polygons can be erased from the vegetation polygon to calculate acres of vegetation outside facilities and then clipped to each Management Unit to calculate the vegetation with each.

To detect unauthorized trail creation and measure the success of restoration projects of vegetation gain or loss isolated using the symmetrical differences tool and the polygons for the desired years. Restoration projects and trails that have been overgrown show gains, and unauthorized trails show as losses.

A field survey estimating vegetation cover using quadrats is conducted in conjunction with the above model to quantify the model's accuracy. Twenty-four points are surveyed; twelve are randomly selected. The other twelve are selected from potential problem areas within the model, such as in mowed areas or along edges of

roads and trails. The northwest corner of each quadrat is mapped using *Field Maps* and the north edge-aligned, so the northeast corner is pointed directly east. Matching polygons are drawn on ArcMap to compare to the NDVI model. A chi-square analysis uses the observed (actual) and estimated (NDVI) data.

Uncertainties

There are errors associated with using NDVI analysis. Shadows or objects may sometimes be misidentified as vegetation or water and buildings as bare ground. Also, the aerial images were taken during different times of the day or at different angles- shadows, soil reflectance, stretching of objects, or precipitation variation can affect the results. The imagery was flown as close to the previous dates as possible to reduce variables in the image difference.

Since 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.

VegCAMP Surveys

Baseline

OHMVRD and NRD staff lead this effort with CDFW providing training and support. Field surveys were conducted in Spring 2021, and digitizing was done in Summer 2021. Full protocols are available through the [CDFW VegCamp Publications](#). Field teams conducted seven formal surveys (2 Relevés, 2 Reconnaissance's, and 3 Rapid Assessments) on 3/12/21 and 3/17/21, and additional informal surveys to confirm species and alliances on 6/30/21.

NAIP 2020 imagery was used as the baseline imagery for this mapping project, keeping with VegCAMP standards. Supplemental imagery used to inform image interpretation included Google Earth historical imagery and 2018 NAIP imagery.

Results can be found in Section 2.3.4 VegCAMP and Plant Communities.

Methods

VegCAMP classifies vegetation according to the National Vegetation Classification System (NVCS) standards, which is a hierarchical classification of vegetation types, with alliance and association at the finest scale level. An association is a characteristic range of species composition, and an alliance is composed of one or more associations.

VegCAMP uses the USDA PLANTS database as the standard for species nomenclature to be consistent with the NVCS. This standard means that some species names may not reflect commonly accepted changes in California-based taxonomies. For example, VegCAMP refers to the grass with the common name Italian rye, as *Lolium perenne*, not *Festuca perennis* (the current nomenclature used by the California Native Plant Society and the Jepson eflora). This project will use the VegCAMP nomenclature when referring to alliance names (e.g., the *Lolium perenne* Semi-natural Herbaceous Alliance). However, it will note synonymous species names

used by the Jepson eflora and the California Native Plant Society to clarify California-based scientists and managers.

To be consistent with other VegCAMP mappings throughout the State, vegetation for this project has been mapped to a minimum mapping unit (MMU) of 1 acre, with special stands such as wetlands or vernal pools mapped at ¼ acre. Vegetation is mapped to the alliance level when possible or the group or macrogroup level for herbaceous polygons. Mapping attributes for each polygon include the name of the vegetation type and the associated hierarchy within the NVCS, percent cover of trees, shrubs, herbs, and exotic species, roadedness (impact from roads or trails within the polygon), and crosswalks to other vegetation classification systems.

Uncertainties

CDFW developed the State Vegetation Standard, based on the National Vegetation Classification Standard, in collaboration with state resources departments, including CDPR and other federal, non-profit, and private entities (see "A Shared Vision for the Survey of California Vegetation"). The State Vegetation Standard is the best available science regarding classifying and organizing vegetation communities and is the "industry standard" within California. It is widely used in wildlife and plant conservation, fire management and analysis, development and planning, climate change analysis, invasive species monitoring, hydrology, and watershed studies.

Ongoing Restoration Area Survivorship and Health Monitoring

Baseline

The planting areas shown in Figure 47 were part of mitigation for a 4x4 project completed in 2011, including irrigation to water the plants easily. Shortly after the initial plantings, California experienced a drought, and the irrigation was turned off to conserve water. As a result, many of the plants didn't survive. Since 2018, park staff have replaced dead plants and monitored their health and survival. Species included western redbud (*Cercis occidentalis*), coyote brush (*Baccharis pilularis*), California sycamore (*Platanus racemosa*) and coffeeberry (*Frangula californica* and *F. tomentella*), live oak (*Quercus wislizeni*), valley oak (*Q. lobata*), buckbrush (*Ceanothus cuneatus*) and foothill pine (*Pinus sabiniana*). The baseline at the end of 2020 was 170 plants.

4x4 Area Native Vegetation Planting Plan - Plot Overview



Figure 47. Locations of Native Plantings up to 2020 in Prairie City SVRA.

Methods

Each of the native plantings has a unique identifying number that is tracked and mapped in *Field Maps* (figure H). Once or twice per week in the summer and fall, resource staff water new plants and any previous year's plants exhibiting symptoms from lack of water. The health of plants is monitored on a scale of 0-10, with 0 indicating a dead plant and 10 indicating a thriving plant, and any other notes about new plantings are recorded to an Excel file that can be imported into *Field Maps*. Many plants also have associated irrigation, which is tracked for any malfunctions.

DBH, cover area, and NDVI may be monitored using field surveys or GIS analysis using aerial imagery to monitor the health of established trees. Oak woodland health may be monitored using the cover supplied by the VegCAMP survey and, if NDVI is used, the analysis will follow the same method as described in the GIS-based assessment to calculate the NDVI number.

Uncertainties

Using a scale for monitoring health can be subjective; therefore, surveyors will create calibration cards before the start of the surveys for data collection consistency.

Special-Status Plant Surveys

Surveys will be conducted park-wide every five years following the 2018 [CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities](#) (CDFW 2018). If time does not allow for a full park-wide survey, Management Units may be surveyed on a rotation. Observations of special-status species will be reported to the CNDDDB.

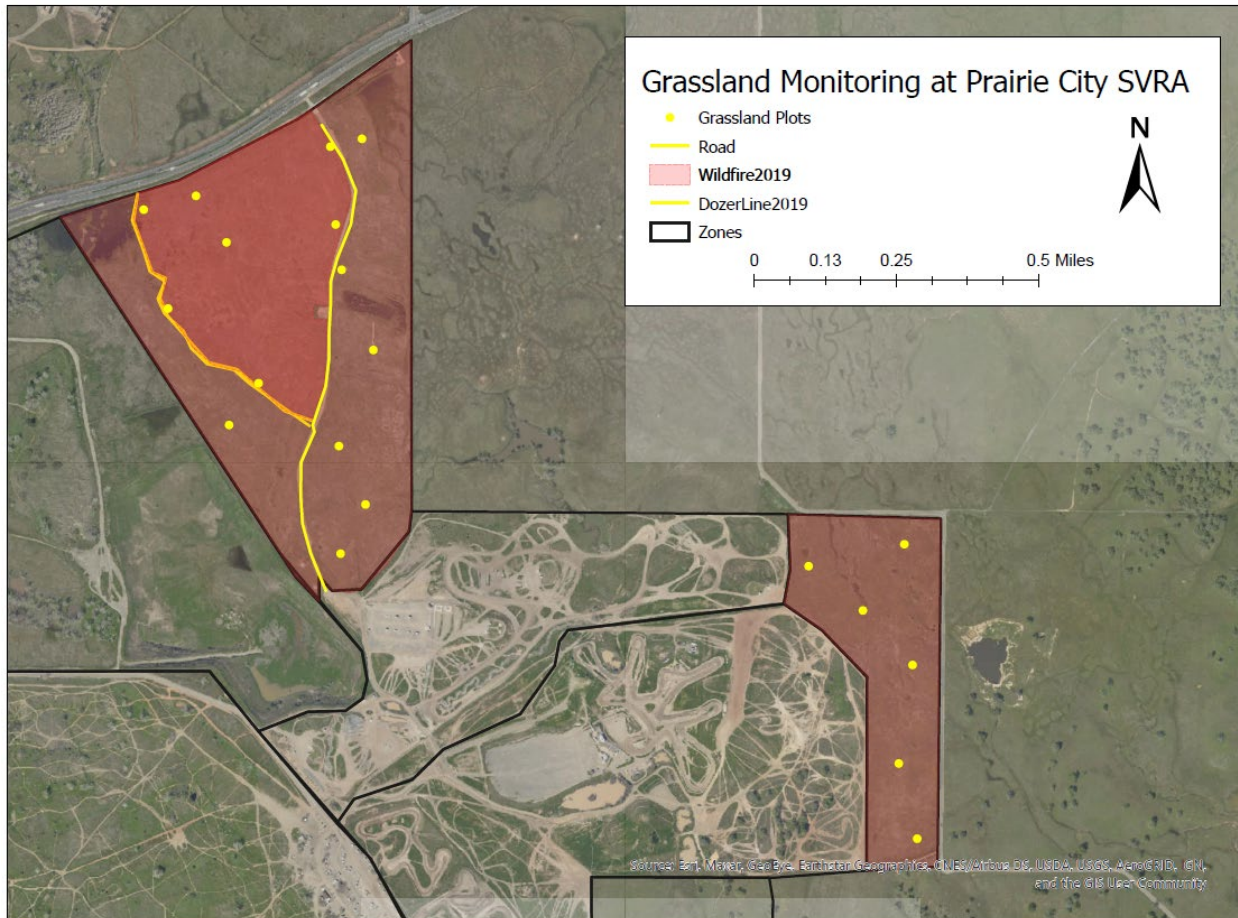
Pre/Post Prescribed Burn Relevé Survey

Baseline

In preparation for a prescribed burn within the Vernal Pool management area, State Parks staff conducted field surveys at twenty randomly located plots following a modified CNPS relevé protocol in May and June 2020 (CDPR 2021g). Since the focus of the burn project is to reduce the cover of the invasive grass Medusahead (*Elymus caput-medusae*), the survey focus was to collect data on the cover of the current year's Medusahead and thatch left over from previous years of growth. Visual estimate of percent cover was recorded for other major species and total vegetative cover, and a comprehensive list of all species occurring in the plot was recorded. Errors may have been introduced given the timing and dry conditions during the survey increasing the difficulty in accurately identifying specific species. However, distinct species identification was not required for the coverage estimations.

Methods

Points were chosen using a systematic random placement to provide sampling coverage distributed across the two project sites (Figure 48), with 14 in the larger northern section (130 acres) and 6 in the smaller southeastern section (45 acres). The points were entered in ArcGIS online and transferred to the Collector app to navigate to in the field. The points were the center of each plot following a modified [CNPS relevé protocol](#). Using pin flags, staff measured a radius of 5.6 meters in 4 directions to create a 100 m² circular plot.



May/June 2020

Figure 48. Locations of 2020 Relevé Survey Points.

Since the focus of prescribed burns will be to reduce the cover of the invasive grass medusahead (*Elymus caput-madusae*), the focus of the survey was to collect data on the cover of the current year's Medusahead as well as that of thatch left over from previous years of growth and species richness. Visual estimate of percent cover was recorded for other major species and total vegetative cover, and a comprehensive list of all species occurring in the plot was recorded. Surveys will be completed in the spring during the peak blooming period when most species are identifiable to the species level.

Uncertainties

With the new housing developments projects in the surrounding area, it is unknown whether prescribed burns will be possible in the future. The timing and frequency of prescribed burns may also be out of the park's control.

EDRR Invasive Plant Monitoring (Future)

Baseline

No focused mapping for widespread or EDRR invasive plants has been completed, so the estimated baseline percent cover was determined from VegCAMP surveying and mapping during the Natural Resource Assessment (Section 2.3.7). A more accurate baseline will be captured after initial surveys.

Methods

This methodology is for the pilot season at Prairie City SVRA. After completing one year of pilot surveys, the protocol may be modified to improve the surveys. Early Detection and Rapid Response (EDRR) surveys are generally conducted between March and August using the protocol developed in the CDPR EDRR Handbook for Invasive Species Management (CDPR 2020b).

Surveys should be conducted when target species are most detectable, primarily during the flowering season. Surveys are conducted on foot, primarily along road and trail corridors and within important resource conservation areas like the Vernal Pool MU and recent restoration areas (Figure 49). The survey route within the Vernal Pool MU is 3.5 miles, 0.8 miles within the Whale, 1.1 within Oak Hill, and 1.3 miles within Coyote Gulch. Target species were selected based on habitat availability and feasibility from the California Invasive Plant Council WeedMapper species list for the area surrounding the Prairie City SVRA detection region (Table 8). These target species are not yet widespread in the park or within certain areas of resource conservation but can become widespread.

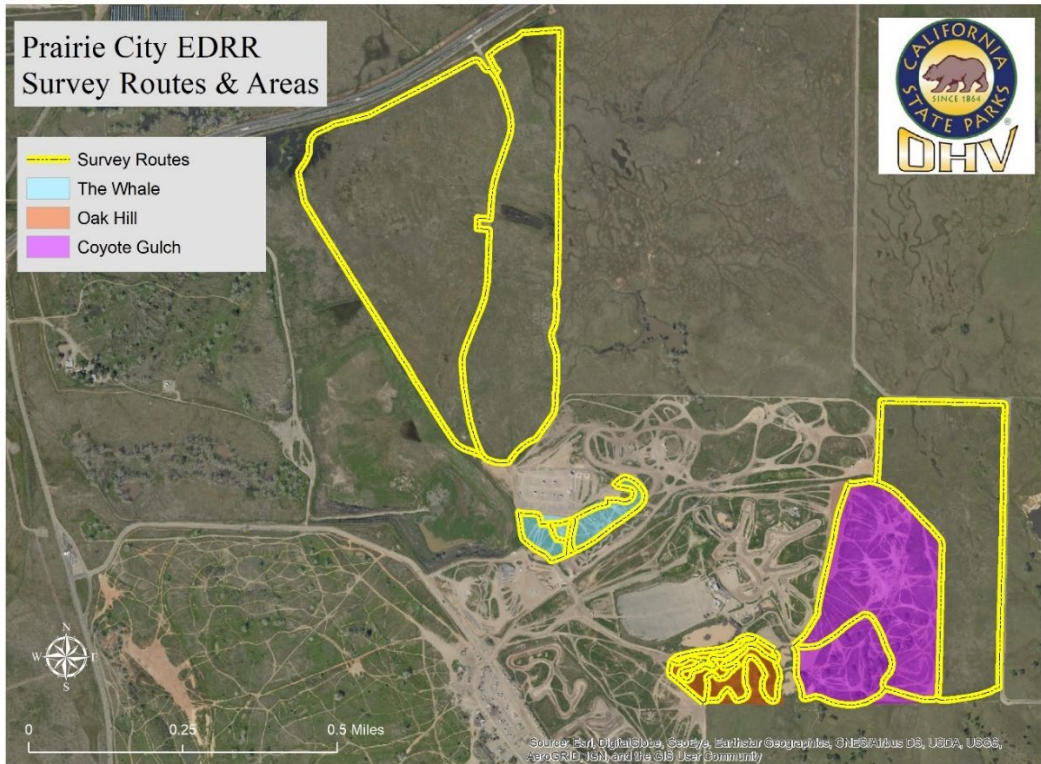


Figure 49. Potential EDRR Survey Locations

A report summarizing the PCSVRA surveys efforts and results will be prepared annually and provided to NRD. Information to be included in the report includes applications used, number of staff that were involved and person-hours spent, any changes to species lists or survey routes, and maps showing tracklogs and species mapped.

Table 8. List of EDRR target species.

Edrr Target Species	Common Name	Bloom Period
<i>Arctotheca prostrata</i>	sterile capeweed	Mar-Aug
<i>Carduus nutans</i>	musk thistle	Jun-Jul
<i>Tamarix parviflora</i>	smallflower tamarisk	Apr-Nov
<i>Acroptilon repens</i>	Russian knapweed	Mar-Aug
<i>Ailanthus altissima</i>	tree-of-heaven	May-Jun
<i>Anthoxanthum odoratum</i>	sweet vernalgrass	May-Jun

Edrr Target Species	Common Name	Bloom Period
<i>Bassia hyssopifolia</i>	fivehook bassia	Jun-Jul
<i>Brassica tournefortii</i>	Saharan mustard, African mustard	Dec-Aug
<i>Carthamus lanatus</i>	woolly distaff thistle	May-Sept
<i>Centaurea calcitrapa</i>	purple starthistle	Jul-Oct
<i>Centaurea diffusa</i>	diffuse knapweed	Mar-Aug
<i>Centaurea stoebe ssp. micranthos</i>	spotted knapweed	May-Oct
<i>Cirsium arvense</i>	Canada thistle	Jun-Sept
<i>Cynara cardunculus</i>	artichoke thistle	Apr-Jun
<i>Dipsacus fullonum and D. sativus</i>	common and Fuller's teasel	Jun-Aug
<i>Euphorbia oblongata</i>	oblong spurge	Mar-Aug
<i>Isatis tinctoria</i>	dyer's woad	Apr-Jul
<i>Lepidium appelianum</i>	hairy whitetop	Apr-Sept
<i>Lepidium chalepense</i>	Lepidium chalepensis and L. draba	May-Jun
<i>Ligustrum lucidum</i>	glossy privet	Jun-Sept
<i>Linaria vulgaris</i>	yellow toadflax, butter, and eggs	Apr-Sept
<i>Lythrum salicaria</i>	purple loosestrife	Jun-Sep
<i>Nicotiana glauca</i>	tree tobacco	Mar-Sept
<i>Onopordum acanthium</i>	Scotch thistle	May-Aug
<i>Ranunculus repens</i>	creeping buttercup	Apr-May
<i>Sesbania punicea</i>	red sesbania, scarlet wisteria	Mar-Oct

Edrr Target Species	Common Name	Bloom Period
<i>Sinapis arvensis</i>	wild mustard, charlock	May-Oct
<i>Tamarix aphylla</i>	athel tamarisk	Apr-Nov
<i>Tribulus terrestris</i>	puncture vine	Jun-Oct

Uncertainties

Park staff trained using the CDPR EDRR Handbook, focused on non-SVRAs. It will be a challenge to properly manage EDRR when OHVs can travel throughout most of the park swiftly, potentially carrying invasive species with them. Since 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.

Widespread Invasive Plant Monitoring (Future)

Baseline

No focused mapping for widespread invasive plants has been completed, so the estimated baseline percent cover was determined from VegCAMP surveying and mapping during the Natural Resource Assessment (Section 2.3.7). A more accurate baseline will be captured after initial surveys.

Methods

This methodology has yet to be determined. When a document is available, it will be posted for public review and submitted to NRD for best available science confirmation. Species were selected based on habitat availability and feasibility from the California Invasive Plant Council WeedMapper species list for the area surrounding the Prairie City SVRA detection region (Table 9).

Table 9. List of widespread invasive plant monitoring tentative species.

Widespread Target Species	Common Name	Bloom Period
<i>Dittrichia graveolens</i>	stinkwort	Sept-Dec
<i>Chondrilla juncea</i>	rush skeletonweed	Jul-Oct
<i>Foeniculum vulgare</i>	fennel	May-Sept
<i>Vinca major</i>	big periwinkle	Jan-May

Widespread Target Species	Common Name	Bloom Period
<i>Aegilops triuncialis</i>	barb goatgrass	May-Jul
<i>Centaurea solstitialis</i>	yellow starthistle	Apr-Sept
<i>Elymus caput-medusae</i>	medusahead	Apr-July

Wetland Mapping in the Vernal Pool MU (Future)

Methods

Wetlands will be digitized using multispectral aerial imagery with an infrared band or drone imagery flown in the winter when pools are filled with water. The digitizing protocol will follow a modified version of the On-Screen Method described in the [Data Collection Requirements and Procedures for Mapping Wetland, Deepwater, and Related Habitats of the United States](#) (USFWS 2020). This protocol uses approved Federal Standards for mapping, monitoring, and reporting wetland data for habitat mapping purposes at a medium resolution. The Vernal Pool MU is much smaller than the project areas usually mapped with this protocol. Therefore, the level of detail required is smaller than the required units and maximum scale following the protocol. The imagery resolution will be less than 1ft, and digitizing features will be done at a 1:250 scale. Ground-truthing of the geometry is useful to verify a map's accuracy and value. This process is done through a field assessment of all polygons. The data will not be submitted to USFWS as it will be more precise than the rest of their dataset.

Large Branchiopod Habitat Assessment in Zone 1 (Future)

Baseline

This survey will determine the baseline of large branchiopod habitat within Zone 1 MU.

Methods

The purpose of this assessment will be to identify and map aquatic features which have the potential to support federally listed large branchiopods (e.g. vernal pool fairy shrimp [*Branchinecta lynchi*] and vernal pool tadpole shrimp [*Lepidurus packardii*]). For the purposes of this assessment, potential habitat for federally listed large branchiopods is defined as any seasonally inundated depression that, on average, ponds water two inches or greater in depth for 14 or more consecutive days for fairy shrimp, and 30 or more consecutive days for tadpole shrimp (Gallagher 1996, Helm 1998). Habitats in which water flows swiftly (e.g., creeks, streams, and ephemeral drainages), or semi-permanent to permanently inundated areas will not be considered suitable habitat for listed large branchiopods (USFWS 2017).

The assessment will include two site visits timed to coincide with optimal field conditions for identifying suitable branchiopod habitat (i.e. when depressional features are inundated with water). The assessment will be based primarily upon direct observations of hydrology, including inundation observed in the field and on aerial photographs. Determinations of appropriate habitat will be based on qualitative hydrologic observations based on current field conditions and will not include any quantitative monitoring or measurement of hydroperiod. Potential habitat for listed large branchiopods in Zone 1 will be mapped in the field using a global positioning system (GPS) unit capable of sub-meter accuracy (e.g., Trimble GeoXT) and/or geo-rectified aerial photography.

A consultant will be contracted to conduct this monitoring. In which case, the biologist will have the proper permits and follow the standardized guidelines for listed large branchiopods in a manner similar, if not identical, to surveys done in the past. The report for this assessment will be included in the Annual Report for the year following the survey. Observations of special-status species will be reported to the CNDDDB.

References

Gallagher, S. P. (1996). Seasonal Occurrence and Habitat Characteristics of Some Vernal Pool Branchiopoda in Northern California, U.S.A. *Journal of Crustacean Biology*, 16(2), 323–329.

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Helm, B. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124- 139. In Ecology, conservation, and management of vernal pool ecosystems – proceedings from a 1996 conference, C. W. Witham, E.T. Bauder, D. Belk, W.R. Ferren, Jr., and R. Ornduff, eds. California Native Plant Society, Sacramento, California. 285 pp.

USFWS. 2017. [Survey Guidelines for the Listed Large Branchiopods](#). Revised November 2017.

Annual Roadside Trimming Program Monitoring

Baseline

This monitoring documents which of the 62 elderberries growing near Park roadways must be trimmed. All known elderberries are mapped with GPS and have a unique identifying number (Figure 50). The trimming started in 2018, and baseline data was gathered by driving the roads in both directions, looking for elderberries growing with the fog line or near to it. The survey also gathered data such as ID, vigor, height, estimated stems greater than one inch, and whether it was in riparian habitat. The park is within the VELB species range; however, no VELB has ever been observed in the park. Most of the elderberries are located in upland habitats.

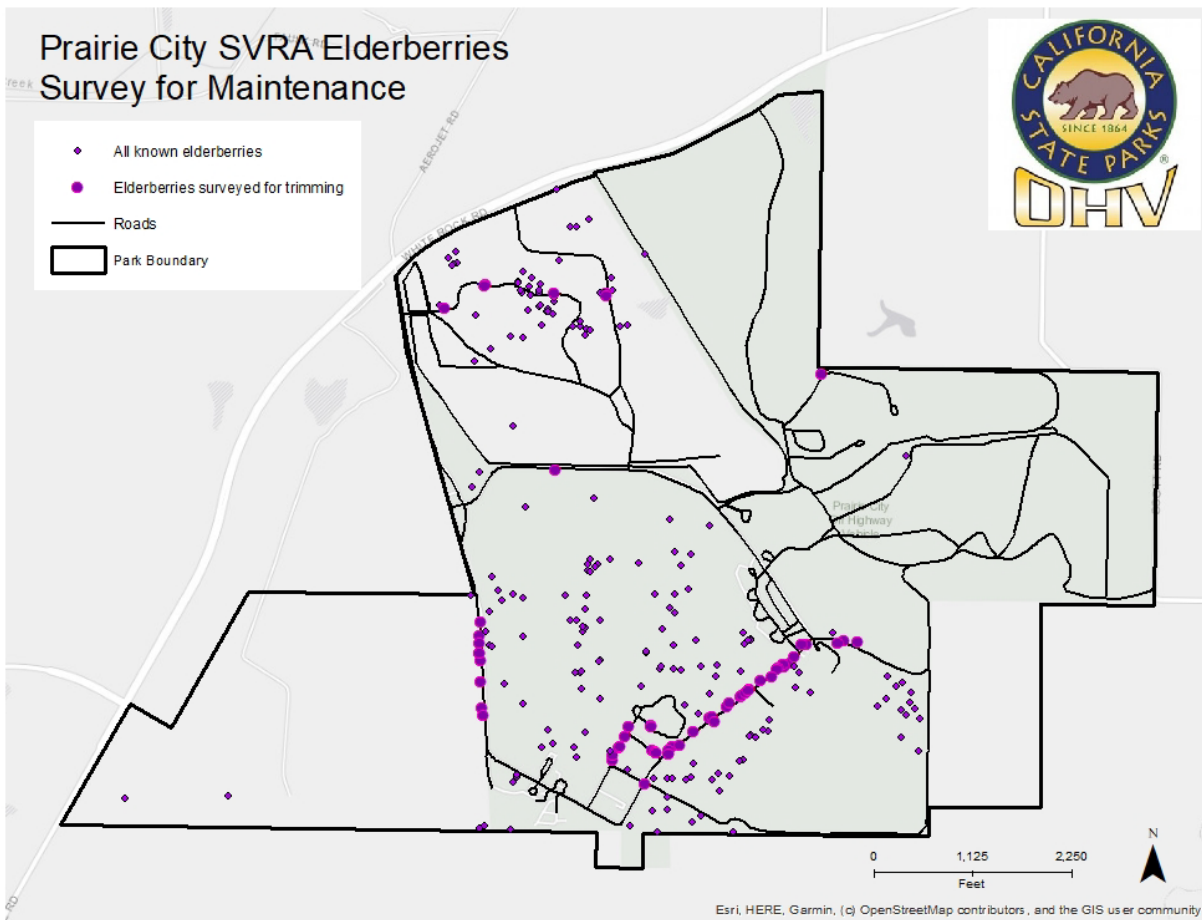


Figure 50. All known locations of elderberries within Prairie City SVRA and the elderberries surveyed for trimming.

Methods

Staff drive roads in both directions and, if the elderberry grows within the fog line or is expected to during the growing season, the elderberry will be trimmed. An exit hole survey is completed before trimming. Trimming occurs between November and February (before new leaves bud). It avoids the removal of any branches or stems that are ≥ 1 inch in diameter ([USFWS VELB Framework](#)) to avoid and minimize adverse effects to VELB when trimming. Dead stems, regardless of size, may also be trimmed since the beetle larvae feed on the pith of live elderberry plant stems; dead stems are not expected to be inhabited by the beetle. Before and after pictures are taken and documented each year, along with a report and map of which elderberries are trimmed.

Uncertainties

A qualified biologist conducts the surveys and the trimming or always oversees the work. This methodology was agreeable to USFWS biologists during informal consultation within the park in 2018. During this

consultation, it was determined that VELB was unlikely to be present at Prairie City SVRA; however, absence has not been confirmed.

Elderberry Inventory

Baseline

Elderberries were mapped using aerial imagery, and visible flowering stage and accuracy were checked using *Field Maps* in 2021. Using this method, an additional seven elderberries were identified for 248 within the park.

Methods

A Park-wide survey for elderberries is conducted every five years in the spring. Aerial imagery may be used to digitize the location of elderberries if the flowering stage is distinguishable from non-elderberry species. The accuracy will be checked in the field using *Field Maps*. During the field visit, additional data will be collected, such as the survey date, estimated plant height and width, whether the shrub is in riparian or non-riparian habitat (USFWS 2017), and if the shrub is within 50 meters of a designated trail or facility. The dripline boundary will be mapped with the Collector if the shrub is within 50 meters of a designated trail or facility. A 20ft buffer is created using ArcMap 10.8 or ArcGIS Online. Elderberries will also be surveyed on a project level basis between inventory surveys and may be updated at that time if significant growth has occurred.

Uncertainties

Some small elderberries may be missed during the inventory. A thorough survey for elderberries will also be completed as part of the project environmental review, and any new elderberries observed will be added to the total inventory.

Pre/Post-Special Event Monitoring

Baseline

Baselines will be determined for each special event during the pre-event monitoring.

Methods

The routes or stations of any special events will be monitored on foot or by vehicle to note any potential impact on natural or cultural resources. If possible, the course will be rerouted to avoid impacts. If it is impossible to reroute the course, flagging will be installed to keep participants and spectators inside the trail tread and away from the resource. Event coordinators will be notified of any changes and impacts to avoid. After the event, the monitoring will be repeated, and damage, if evident, will be documented in a report with pictures before and after the event. Depending on the event, different impacts are possible. Still, the most common are routing a course on an unauthorized trail or through vegetation within the 20ft buffer of

elderberry or through a puddle that may cause trail widening. The permittee might require mitigation if any damage occurs.

Bird Monitoring (Future)

Baseline

Baseline diversity and richness were determined from the 2019 Habitat Monitoring System (HMS) bird point count survey (CDPR 2021f). The baseline 146 species was calculated from the wildlife inventory survey, not including non-natives or those species only observed as flyovers.

Methods

Bird point counts will be surveyed using the IBP sampling protocol at the 43 HMS points as in the 2020 survey, but with a modified recording time and more ARUs. Roughly 20 ARUs frames (including both the Audiomoth and the SM4) will be mounted on new t-posts or to existing trees or fence posts and left to record four hours a day for seven days. At the end of seven days, the ARUs will be removed and installed at the remaining HMS points for an additional seven days. On the first day of the seven days, in-person bird count surveys will be conducted at each HMS with ARUs. Park staff were instructed to audibly announce the beginning and end of the survey to the ARU unit and stand a sufficient distance away from the units so ARUs would not pick up anthropogenic noise (i.e., papers rustling, pen scraping).

IBP will analyze the recordings collected from both the Audiomoth and SM4 units through the BirdNET software to determine if the ARU model has a significant effect on the effectiveness of BirdNET to detect and identify bird species correctly. BirdNET will generate detection/non-detection data for each species observed and overall species richness for that year. Detection/non-detection data will be run through an occupancy model following the multiple-species occupancy model (MacKenzie et al. 2018) to include detection probability and generate richness and diversity for that year. One survey will be completed in the winter and one in the spring. Observations of special-status species will be reported to the CNDDDB.

Uncertainties

This protocol builds off the 2020 survey and is intended to be improved each subsequent year while still comparable to past survey methods. Since 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.

Reptile and Amphibian Monitoring (Future)

This methodology has yet to be determined. When a document is available, it will be posted for public review and submitted to NRD for best available science confirmation.

Small Mammal Monitoring (Future)

This methodology has yet to be determined. When a document is available, it will be posted for public review and submitted to NRD for best available science confirmation.

Trail Camera Monitoring for Large Mammals (Future)

Baseline

The baseline was determined from the total number of large mammals seen throughout the park during the past HMS survey and is not representative of the richness at each camera location.

Methods

Eight trail cameras will be installed in the field in late spring at select locations within the park and left to record data for 45 days. Images will be analyzed by one natural resource staff knowledgeable in mammal identification and will record detection/non-detection observation for each species observed for each recorded day. A species will be counted as detected if observed at least once in 24hrs. Detection/non-detection data will be run through an occupancy model following the multiple-species occupancy model (MacKenzie et al. 2018) to include detection probability and generate richness and diversity for that year.

Uncertainties

In the past, detection probability was not included, so the baseline is observed richness rather than a true calculation of estimated richness in the park. Since 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.

13 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.”