Appendix A

EXISTING LAWS, CODES, AND POLICIES

Appendix A. EXISTING LAWS, CODES, AND POLICIES

The goals and guidelines in the General Plan provide some of the broadest level of direction for management of Red Rock Canyon State Park (the Park) and are based on existing federal and state laws, codes, state executive orders, and the California Department of Parks and Recreation (State Parks) policies.

To understand the implications of the actions described in the General Plan, it is important to describe some of the laws, codes, and policies that underlie the management actions. Many management actions for the Park are required based on law and/or policy and are therefore not affected by the General Plan. For instance, a general plan is not needed to decide that it is appropriate to protect endangered species, control nonnative invasive species, protect archaeological sites, conserve artifacts, or provide for universal access – laws, codes, and policies already require State Parks to fulfill these mandates. State Parks would continue to implement these requirements with or without a General Plan.

The following includes the most pertinent laws, codes, and policies related to planning and managing the Park:

A.1 AIR QUALITY

The Clean Air Act of 1970, (42 US Code [USC], Sections 7401 et seq.) regulates air emissions from area, stationary, and mobile sources. Under this law, National Ambient Air Quality Standards (NAAQS) are established for each state by the EPA to protect public health and the environment.

A.1.1. POLICY GUIDANCE/SOURCES:

Clean Air Act, 1970.

A.2 CLIMATE CHANGE

Numerous state and federal laws, policies, and guidelines have been enacted toreduce greenhouse gas emissions, mitigate for emissions, and sequester carbonin an effort to slow the rate of climate change.

A.2.1. POLICY/GUIDANCE SOURCES:

California Executive Order B-18-12

Requires State Agencies to reduce overall greenhouse gas emissions by atleast 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.It also requires all buildings built or undergoing major renovations after 2025 be constructed as Zero Net Energy facilities. Further, State Agencies shall continue to take action to reduce grid-based energy purchases by at least 20% by 2018.

California Executive Order S-03-05

Establishes greenhouse gas emission reduction targets, creates the Climate Action Team, and directs the Secretary of Cal/EPA to coordinateefforts with meeting the targets the heads of other state agencies.

State Senate Bill 97

Requires development of CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions."

A.3 CULTURAL RESOURCES

Cultural resources embrace human values, ranging from the evidences of early people dating back more than 10,000 years to sites and buildings of people whoare making history today. "History", as it is used by State Parks, means the totality of human experience in California. Some of the federal and state laws, codes, and policies that are in place to help preserve, protect, and restore archaeological and historical resources are listed below:

A.3.1. POLICY GUIDANCE/SOURCES:

California Code of Regulations (CCR)

Title 14, Division 3, Chapter 1: **§ 4308.** Prohibits removal, defacement, destruction, etc. of archaeological or historical objects on State Park lands.

Title 14, Division 6, Chapter 3: **§ 15064.5.** Determining the Significanceof Impacts to Archaeological and Historical Resources.

California Environmental Quality Act of 1970 (CEQA)

The California Environmental Quality Act of 1970 (CEQA) requires state agencies to analyze and disclose the potential environmental effects, both direct and indirect, of a proposed discretionary action. The Environmental Impact Report (EIR) is an integral component of this General Plan.

Department Operations Manual (DOM) Chapter 0600

Provides the environmental review directives and guidelines for State Parks. The objectives, criteria, and specific procedures contained in the chapter define the roles, responsibilities, and authority for State Parks' compliance with the CEQA and its Guidelines.

Department Operations Manual (DOM) Chapter 0400

Cultural Resources and associated Departmental Notices are the basicpolicy document for the State Park System. Together, they guide the management of cultural resources under the jurisdiction of theDepartment.

Departmental Notice No. 2007- 05

Consultation with Native Americans.

Governor's Executive Order B-10-11

Consultation with Native American Tribes.

Governor's Executive Order W-26-92

Preservation, protection, restoration, maintenance of historical,architectural, and archaeological resources.

Government Code

§ 6254.(r) Restriction of record disclosure regarding Native American graves, cemeteries, and sacred sites.

§ 6254.10 Non-disclosure of archaeological site information maintained by CDPR.

Health and Human Safety Code

§ 7050.5 Prohibits removal of human remains.

§ 7052 Prohibits mutilation, disinterment, removal of, or sexual contact with human remains.

National Historic Preservation Act of 1966 (NHPA)

Established the National Register of Historic Places, National Historic Landmarks, and State Historic Preservation Offices (SHPO). It also requiresthe evaluation of impacts of projects on historic properties through use ofthe "Section 106" process.

National Environmental Policy Act of 1969 (NEPA)

Applies in addition to CEQA when Federal monies are used, such asthrough a grant or partnership agreement.

Penal Code

§ 622 ½ Prohibits destruction, defacement of objects of archaeological or historical interest.

§ 623 Prohibits destruction, removal, or defacement of natural or cultural material.

Public Resources Code

§ 5021 Registration of State Landmarks and Points of Interest; publications of archaeological investigations.

§ 5024 State-owned historical resources; policies to preserve; master list; documentation.

§ 5024.5 State-owned historical resources; notice and summary of proposed actions to SHPO; mediation responsibility.

§ 5097 Archaeological, paleontological, and historical sites definitions; state lands.

§ 5097.5 Prohibits removal or destruction of archaeological and historical sites.

§ 5097.7 Upon a conviction pursuant to § 5097.5, lists items that are subject to forfeiture.

§ 5097.9 Native American historical, cultural, and sacred sites; free exercise of religion; cemeteries, place of worship on ceremonial sites.

§ 5097.99 Prohibits removal or possession of Native American remains; felony.

§ 5097.991 Repatriation. It is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.

§ 21080.3.1 Consultation with Native Americans.

§ 21083.2 Determining project's effects to Archaeological resources.

§ 21084 Guidelines shall list classes of projects exempt from Act.

§ 21084.1 Historical resources guidelines.

§ 21084.3 Avoid damages to tribal cultural resources.

A.4 NATURAL RESOURCES

Conservation and management of natural resources within the Park are driven by multiple federal and state laws and statutes as well as State Parks policies.

A.4.1. POLICY GUIDANCE/SOURCES:

Bald and Golden Eagle Protection Act of 1940

Prohibits the take, possession, and commerce of bald and golden eagles.

California Code of Regulations (CCR)

The official compilation and publication of the regulations adopted,amended, or repealed by state agencies and have the force of law.

California Environmental Quality Act OF 1970 (CEQA)

The California Environmental Quality Act of 1970 (CEQA) requires state agencies to analyze and disclose the potential environmental effects, both direct and indirect, of a proposed discretionary action.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act grants the State Water Resources Control Board and each of the nine RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Clean Water Act.

Department Operations Manual (DOM) Chapter 0600

Provides the environmental review directives and guidelines for State Parks. The objectives, criteria, and specific procedures contained in the chapter define the roles, responsibilities, and authority for State Parks' compliance with the CEQA and its Guidelines.

Department Operations Manual (DOM) CHAPTER 0300

Natural Resources and associated Departmental Notices are the basic policy document for the State Park System. Together, they guide the management of natural resources under the jurisdiction of the Department.

Endangered Species Act of 1973 (ESA)

Provides for the conservation of ecosystems upon which threatened and endangered species depend, authorizes the listing of species, andprohibits unauthorized take of endangered species.

Migratory Bird Treaty Act of 1918

Prohibits activities detrimental to migratory songbirds such as to "pursue,hunt, take, capture, kill," or attempt to do any of these actions. It also protects "any part, nest, or egg" of migratory birds.

National Environmental Policy Act of 1969 (NEPA)

Applies in addition to CEQA when Federal monies are used, such as through a grant or partnership agreement.

A.5 PHYSICAL RESOURCES

A.5.1. POLICY GUIDANCE/SOURCES:

California Executive Order B-18-12

Orders State agencies to reduce overall water use at the facilities they operate by 10% by 2015 and by 20% by 2020, as measured against a 2010 baseline.

Clean Water Act (1972)

Regulates discharges of pollutants into waters of the United States and regulates surface water quality standards. Requires a National Pollutant Discharge Elimination System (NPDES) permit to discharge any pollutant from a point source.

A.5.2. Built Environment/Physical Resources

Americans with Disabilities Act of 1990

The Americans with Disabilities Act (ADA) prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the public. It sets minimum standards for accessibility for alterations and new construction of facilities. It also requires public accommodations to remove barriers in existing buildings where it is easy to do so without much difficulty or expense.

Access for Visitors with Disabilities

One of the goals of California State Parks is to make sure that everyone – including visitors with mobility challenges – has access to the natural and cultural wonders that make up the system. The Access to Parks Guidelines, first issued in 1994 and revised in 2015, details the procedure to make state parks more accessible while maintaining the quality of park resources. Recommendations and regulations for complying with ADA and state regulations are also included in the guidelines. The All Visitors Welcome: Accessibility in State Park Interpretive Programs and Facilities was issued in 2003, providing guidance on developing accessible interpretive programs and facilities.

Appendix B

BIOLOGICAL RESOURCES REPORT

Biological Resources Report
Red Rock Canyon State Park
Kern County, California

Prepared for:

California Natural Resources Agency
Department of Parks and Recreation

Prepared by:

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Encinitas, California 92024

SEPTEMBER 2019

Printed on 30% post-consumer recycled material.

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SUMMARY

This Biological Resources Report was prepared to compile, synthesize, and update the biological resource information in support of an update to the General Plan for the Red Rock Canyon State Park located in the Mojave Desert of Kern County, California. This report integrates information from federal, state, and regional sources with data from numerous Park-specific studies and observations from 2018 and 2019 field reconnaissance to establish the biological resources baseline for the Park. This overall effort focused on vegetation communities and special features, plant and wildlife species, and wildlife movement. Following synthesis of the biological resource information, key biological functions and management considerations for RRCSP were identified.

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1 INTRODUCTION

Red Rock Canyon State Park (RRCSP or Park) is an approximately 25,325-acre California State Park unit located 25 miles northwest of Mojave, California, off State Route (SR-) 14 at the western edge of the Mojave Desert in Kern County, California. RRCSP is underlain by complex geological formations that create a unique and spectacular landscape for which this Park is known, including sheer colorful cliffs, deep shady canyons, steep ridgelines, and broad alluvial fans interspersed with braided washes.

Originally identified in 1929 by Frederick Law Olmstead as an outstanding area recommended for the State Park system, Red Rock Canyon was brought into the system in 1973 (DPR 1982). Since that time, numerous land acquisitions and transfers have since occurred to this Park unit. In 1994 as part of the California Desert Protection Act, a substantial land transfer from the Bureau of Land Management (BLM) to the State of California, referred to as the Last Chance Canyon Addition, nearly tripled the size of Park. RRCSP currently consists of a primitive campground, nature trails, picnic tables, a visitor center, equestrian day uses, and stargazing via a primitive road network that connects to other public lands in the region. RRCSP, as shown on Figure 1, is the focus of this Biological Resources Report.

1.1 Purpose of the Report

The purpose of this report is to compile, synthesize, and update the baseline biological resource information for RRCSP in support of the ongoing revision of the Park's General Plan. This report integrates information from numerous previous biological surveys with surveys conducted in 2018 to assemble an existing biological setting for RRCSP that will be used in the Park's General Plan revision, which sets the California Department of Parks and Recreation (DPR) policy and management framework for the Park.

1.2 Park Location and Description

RRCSP is located in eastern Kern County, California, along SR-14 approximately 80 miles east of Bakersfield and 35 miles southeast of Ridgecrest. The Park occurs in the western Mojave Desert along the El Paso Mountain Range. The Park is located in the following U.S. Geological Survey (USGS) 7.5-minute quadrangles: Saltdale NW, Dove Spring, Cantil, and Cinco (Figures 1 and 2).

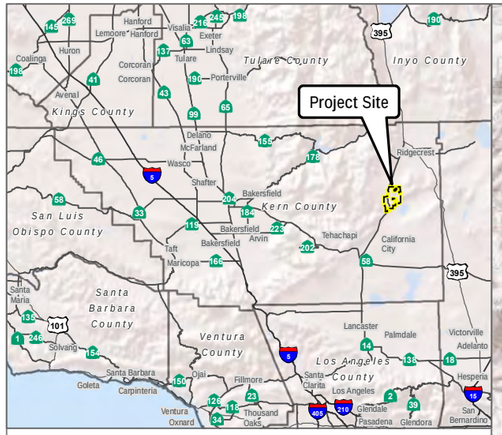
1.3 Planning and Regulatory Context

As stated in Section 1.1, the purpose this Biological Resources Report is to provide baseline biological resources information to support a General Plan update for RRCSP. In 1982, a General Plan was approved for Red Rock Canyon State Park when it consisted of approximately 3,015 acres. The General Plan proposed a number of improvements for the park, as well as policies to protect the

scenic resources. Through subsequent land acquisitions and agreements, the Park has grown to about 25,325 acres. The purpose of the General Plan update is to revise/update the current general plan for RRCSP to include the new properties added since 1982 and establish clear goals and guidelines for future management, development, access, and use of Park properties in their relationship with adjacent public lands and appropriate uses (DPR 2018).

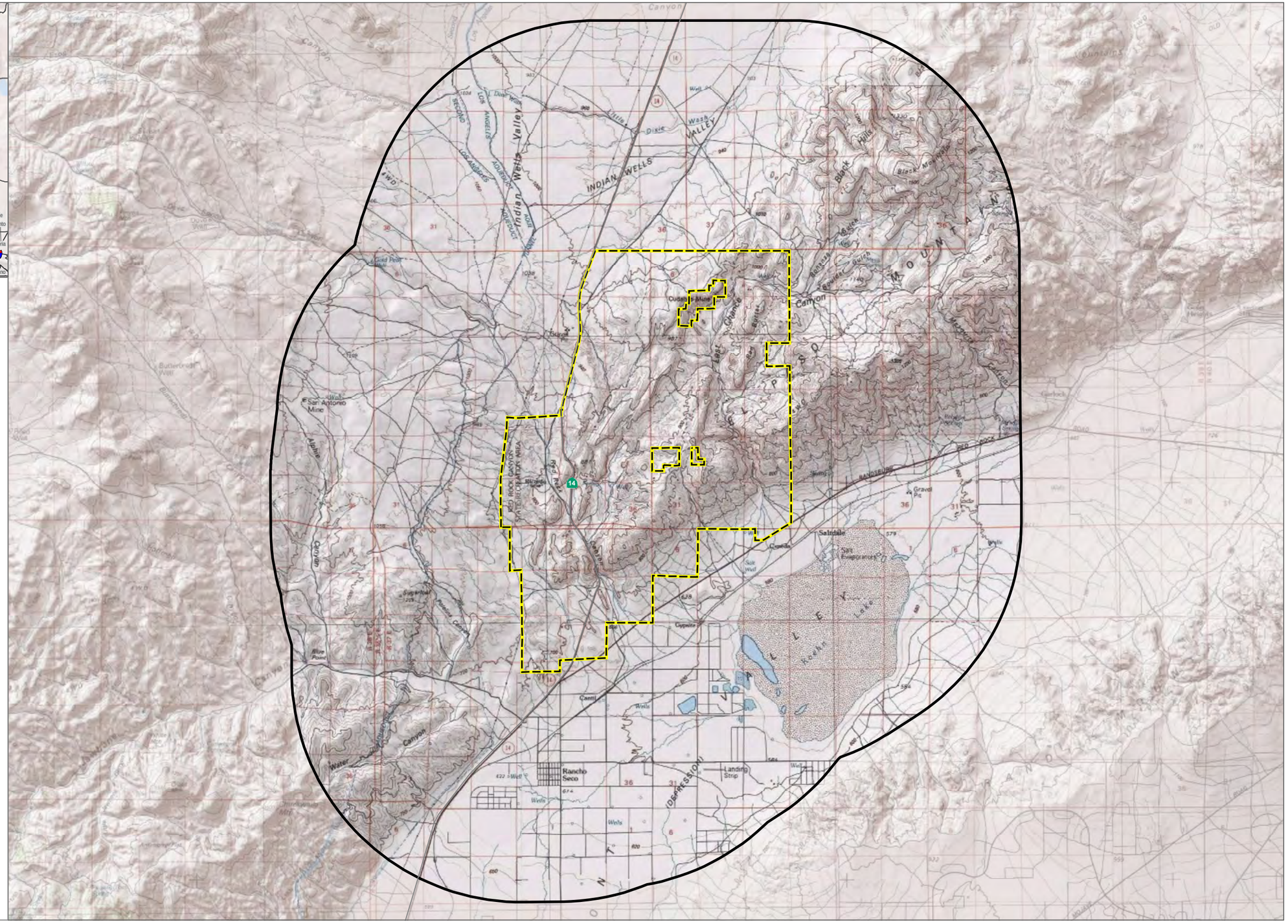
RRCSP is situated in a region with various land ownerships and designations (Figure 3). Public lands administered by the BLM occur to the west, north, and east of the Park. BLM lands are managed according to the BLM's California Desert Conservation Area (CDCA) and Desert Renewable Energy Conservation Plan (DRECP) (BLM 2016a, 2016b). With the exception of BLM Dove Springs Open Off-Highway Vehicle (OHV) Area and Jawbone Canyon Open OHV Area adjacent to the Park, the remainder of the BLM lands surrounding the Park (and the Park itself) are designated as Areas of Critical Environmental Concern (ACECs). ACECs are areas of ecological and cultural significance with specific management directives. The Park, itself, is part of the Mohave Ground Squirrel ACEC and Last Chance Canyon ACEC, and the surrounding ACECs include: Mohave Ground Squirrel, Last Chance Canyon, Jawbone/Butterbredt, El Paso to Golden, and Eagle Flyway. The BLM also identifies this region as a Special Recreation Management Area. Additionally, the El Paso Mountains Wilderness Area occurs just northeast of the Park and the Kiavah Wilderness Area in the southern Sierra Nevada Mountains is situated approximately 6 miles northwest of the Park. DPR's Off-Highway Motor Vehicle Recreation Division recently purchased approximately 28,000 acres of private lands within the matrix of BLM lands immediately adjacent to the Park to the west, which are referred to as the East Kern County Acquisitions. DPR's Off-Highway Motor Vehicle Recreation Division is partnered with BLM to manage OHV recreation and other uses on these lands.

Although this Biological Resources Report was not prepared to support or evaluate any specific action or decision, a federal and state regulatory context was considered in preparing this study. Biological resources relevant to the federal regulatory context include species listed as endangered, threatened, or candidates under the federal Endangered Species Act; sensitive species listed by the BLM; migratory birds protected under the Migratory Bird Treaty Act; the Bald and Golden Eagle Protection Act; and wetlands and waters features regulated under the Clean Water Act. Biological resources relevant to the state regulatory context include species listed as endangered, threatened, or candidates under the California Endangered Species Act; fully protected and species of special concern listed by the California Department of Fish and Wildlife (CDFW); birds and birds of prey protected under California Fish and Game Code (CFGC) Sections 3503, 3503.5, and 3513; and wetlands and waters features regulated under the CFGC Section 1600 and the Porter-Cologne Act. This report was developed to provide sufficient information to establish the biological resource baseline conditions under the California Environmental Quality Act.



Red Rock Canyon State Park

5 Mile Buffer



SOURCE: USGS 7.5-minute Quadrangle

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FIGURE 1

Red Rock Canyon State Park

Red Rock Canyon State Park - Biological Resources Report

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Red Rock Canyon State Park
Local Road
State Park Road
State Park Trail
Other Agency

Opal Peak
Opal Camp
Cudahy Camp
Nightmare Gulch
Scenic Canyon
Last Chance Canyon
Park Headquarters
Hagen Canyon
El Paso Mountains
Randsburg Red Rock Road
14

SOURCE: Bing Maps 2018; California State Parks 2018

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0 2,875 5,750 Feet

FIGURE 2
Park Map
Red Rock Canyon State Park - Biological Resources Report

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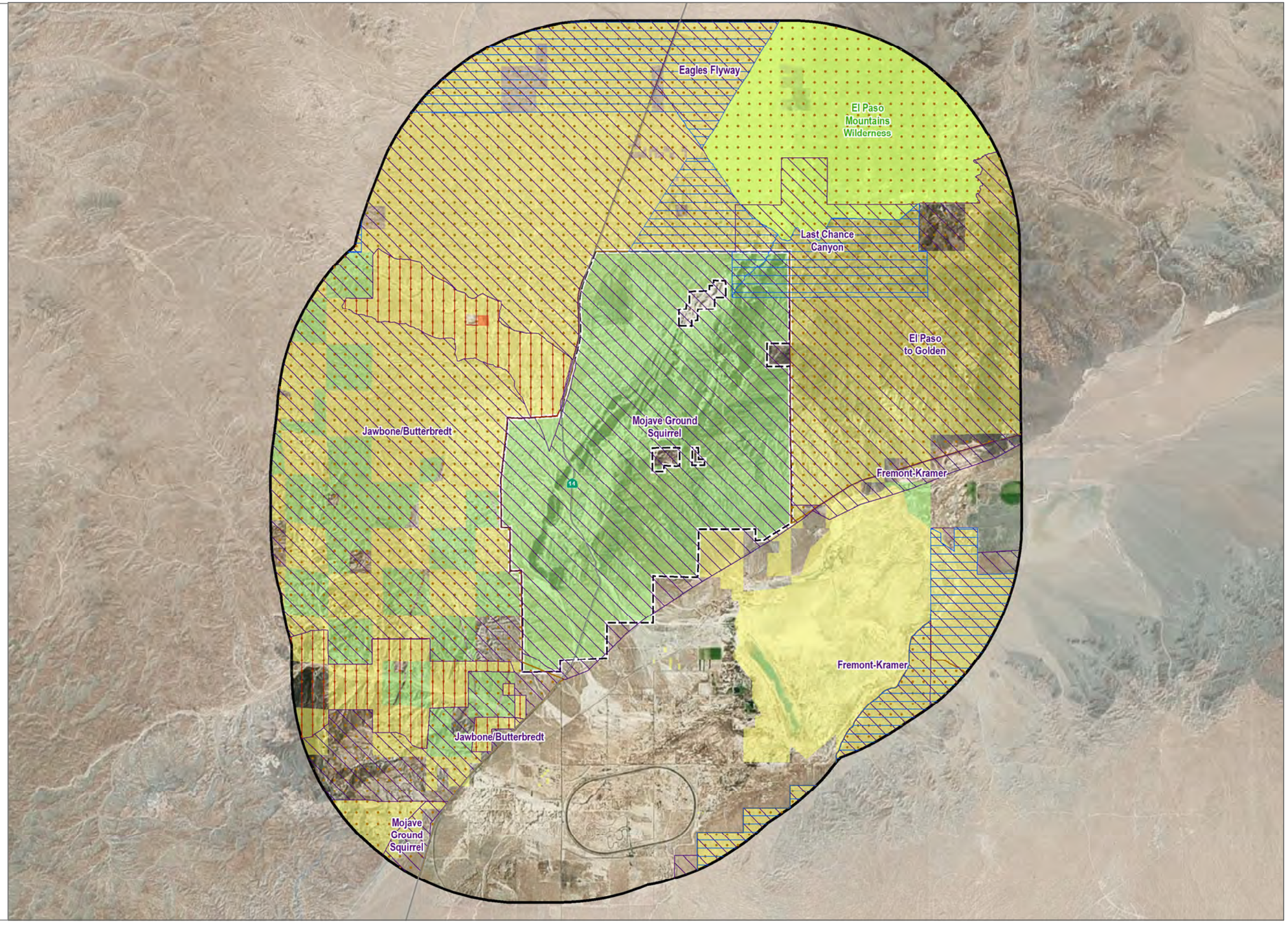
- Red Rock Canyon State Park
- 5 Mile Buffer
- Open OHV Areas
- California Desert National Conservation Lands
- Wilderness Areas
- Special Recreation Management Area
- Areas of Critical Environmental Concern

Ownership

- Bureau of Land Management
- Local Government
- California Parks and Recreation



SOURCE: Bing Maps 2018; BLM 2018

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FIGURE 3

Land Ownership and Designations

Red Rock Canyon State Park - Biological Resources Report

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2 ENVIRONMENTAL SETTING

2.1 Ecoregional Context

RRCSP is situated in a unique transition zone between major California ecoregions: the Mojave Desert and the Sierra Nevada (USDA 2007). The western and lower elevation areas of the Park lie in the High Desert Plains and Hills ecoregion subsection of the Mojave Desert ecoregion, and the El Paso Mountain range portion of the Park is in the Searles Valley–Owlshead Mountains ecoregion subsection of the Mojave Desert ecoregion (Figure 4).

2.2 Climate

The California desert region's climate is generally characterized by hot, dry summers and mild to cold winters. Rainfall events originate from winter frontal storms off the Pacific Ocean and occasional summer convective monsoons, but these sources are variable in different regions of the desert (Lichvar and McColley 2008). The Mojave Desert is a "cold," or winter, desert with about 50% to 70% of rainfall occurring during the winter (Redmond 2009). The western portion of the Mojave Desert has more predictable winter precipitation than the other subregions of the Mojave, accounting for an estimated 82% to 97% of the annual rainfall (Webb et al. 2009). Rainfall amounts are also geographically and seasonally variable and are related to topography and elevation. Annual rainfall totals range from about 2 to 5 inches in valley areas of the Mojave Desert and about 10 to 30 inches in the mountain ranges (Redmond 2009). Drought and wet periods in the Mojave Desert are related to the El Niño Southern Oscillation cycle, which is a cyclical climatic pattern that typically results in increased winter precipitation in Central and Southern California.

2.3 Geology and Soils

The scenic landscapes of RRCSP originate from its unique geological formations. The Park is situated along the Garlock and El Paso faults at the confluence of the Mojave Desert, Basin and Range, and Sierra Nevada geomorphic provinces (Whistler 1987; Department of Conservation 2002). Underlying parent material along the El Paso Mountain Range is granitic. Surficial geology of the Hagen Canyon, Scenic Canyon, and Nightmare Gulch areas is tertiary volcanic flow rock, and uplifting has exposed the underlying sandstone material creating the colorful cliffs of these canyons. Surficial geology in the remainder of the Park is characterized by sedimentary alluviums (Department of Conservation 2000). Where soils mapping is available in the Park, soils include coarse sands, sands, loamy sands, and sandy loams (USDA 2018a).

2.4 Terrain

The El Paso Mountain Range and the cliffs and canyons described in Section 2.3 are the central geomorphological features of the Park. Topography in the RRCSP ranges from approximately

2,000 feet above mean sea level along the southern Park boundary to nearly 3,700 feet above mean sea level at the northeastern corner of the Park. Environmental gradients and physical landforms have been identified as important landscape features that can provide climate refugia and allow for climate change adaptation (Beier and Brost 2010; Theobald et al. 2015). The Park can be categorized into four landform classes based on a standard 30-meter digital elevation model (USGS 2007): canyons/deeply incised streams, mountain tops/high ridges, open slopes, and plains, as shown on Figure 5.

2.5 Land Uses

RRCSP is a unit of the California State Park System designated for public open space and uses such as camping, hiking, and exploring. The Park includes a visitor center, campgrounds, marked routes and trails, day use areas, picnic tables, and signage. Equestrian and vehicle use is permitted on all marked open routes. Patrolling and facility maintenance activities occur throughout the Park, as necessary. Additionally, natural and cultural resource management activities take place throughout the Park, as necessary, including monitoring, enforcement, area/route closures, and habitat restoration. Several private land inholdings occur within the outer boundary of the Park, including lands associated with the Old Dutch Cleanser Mine. Historically, mining was an active land use in the Park and in surrounding lands. A Los Angeles Department of Water and Power utility corridor runs along the western boundary of the Park roughly paralleling SR-14, containing a 500-kilovolt transmission line and a 230-kilovolt transmission line. Additionally, the surrounding lands are a popular OHV and outdoor recreation destination.

Red Rock Canyon State Park

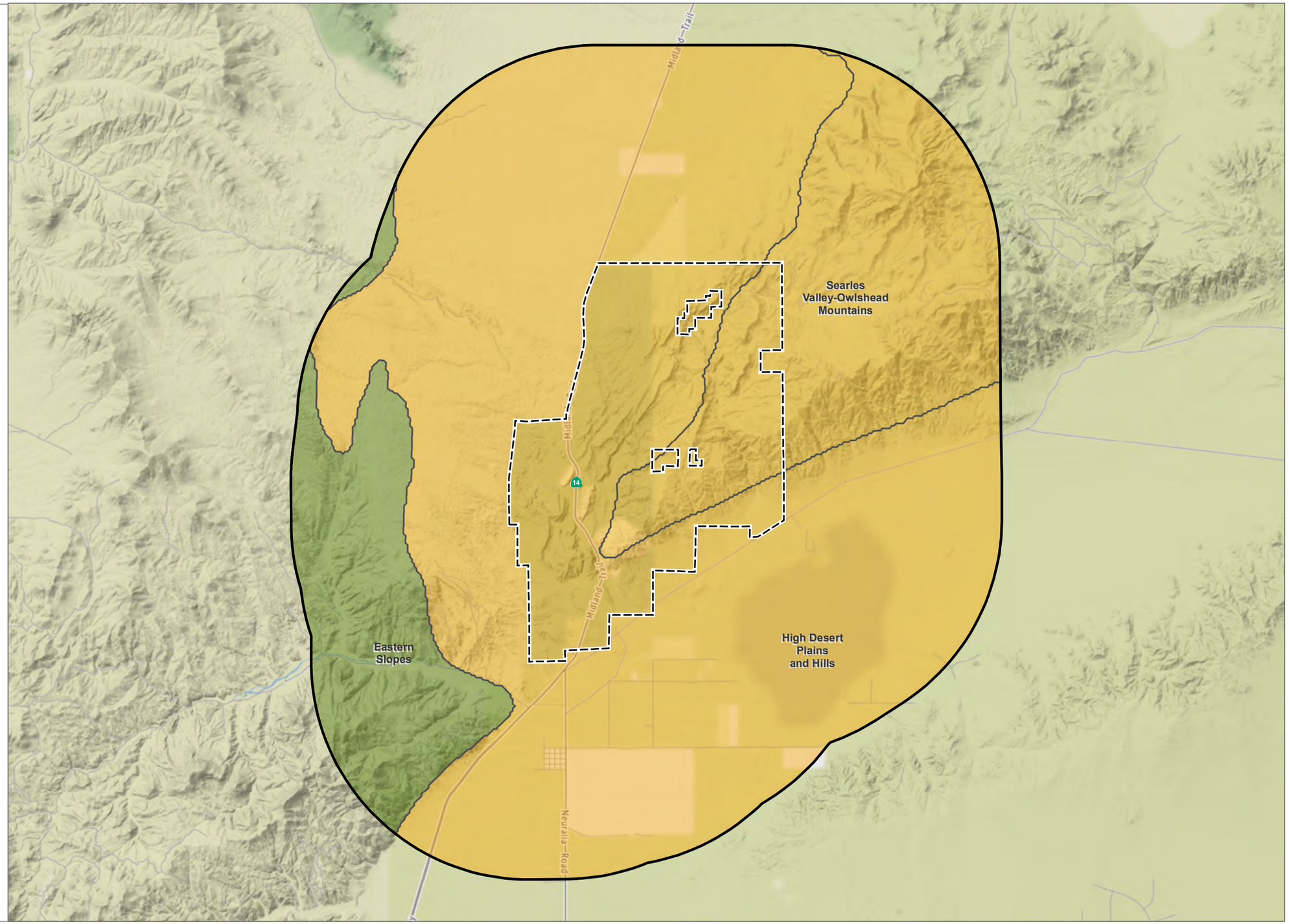
5 Mile Buffer

Ecoregion Subsection

Ecoregions

Mojave Desert

Sierra Nevada



SOURCE: USDA 2016

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FIGURE 4

Landscape Context

Red Rock Canyon State Park - Biological Resources Report

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Red Rock Canyon State Park

5 Mile Buffer

Topographic Contours

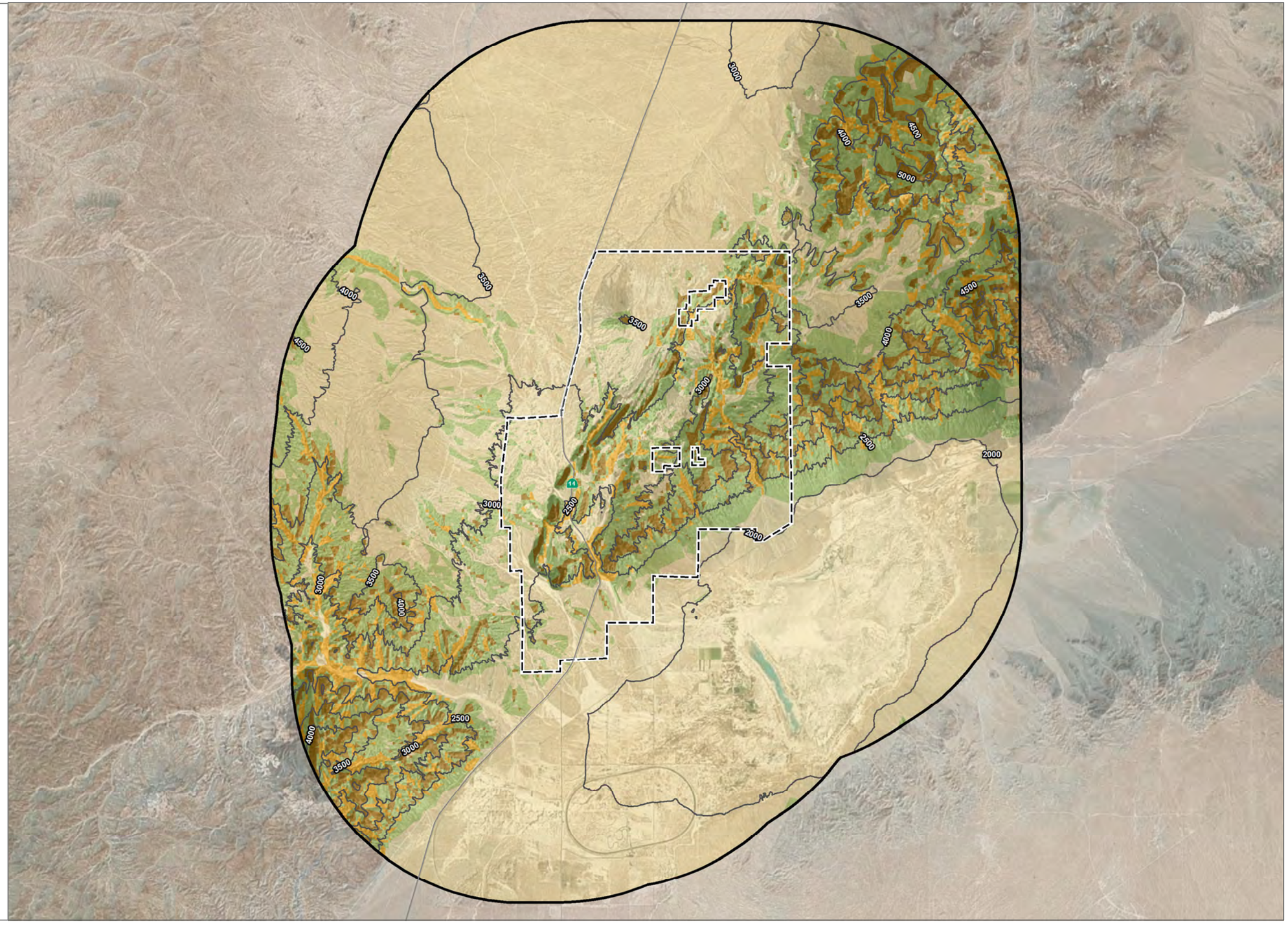
Landforms

Canyons, Deeply Incised Streams

Mountain Tops, High Ridges

Open Slopes

Plains



SOURCE: Bing Maps 2018

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FIGURE 5

Landforms and Topography

Red Rock Canyon State Park - Biological Resources Report

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2.6 Watersheds and Hydrology

Surface waters are scarce in the desert region and streams are typically ephemeral and formed by flashy, episodic events. Red Rock Canyon, Last Chance Canyon, and numerous other channels drain the Park. Stream channels in the Park have typical channel forms as those found throughout the arid west, including braided channels, discontinuous ephemeral channels, and alluvial fans (Lichvar and McColley 2008). A majority of RRCSP drains south and into Koehn Lake just southeast of the Park, while the portion of the Park north of Opal Peak drains north towards Indian Wells Valley. The study area is in the South Lahontan Hydrologic Region (DWR 2003) within the Indian Wells Valley Groundwater Basin and the Fremont Valley Groundwater Basin. Springs/seeps occur where groundwater surfaces through cracks and fissures. Seeps and springs are known from the Park and the surrounding areas; however, no mapped seeps/springs occur in the Park based on the USGS National Hydrography Dataset or U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (USGS 2010; USFWS 2018). Figure 6 shows the hydrological features of the Park and surrounding area.

2.7 Fire History

Historically infrequent in the southwestern deserts, fire has increased in frequency and extent in recent decades and has been attributed to the invasion of non-native annual grasses (e.g., red brome [*Bromus rubens*] and buffelgrass [*Pennisetum ciliare*)]) (Abella 2010; Brooks and Matchett 2006). Non-native plant invasions can alter fire regimes by changing the frequency, intensity, extent, type, or seasonality of fire (Brooks and Matchett 2006). However, invasive non-native plant species have historically not been a substantial issue in the Park. Based on the state fire history inventory, wildfire has never been reported in the Park (CAL FIRE 2017). The nearest historical fires are all greater than 10 miles west and north of RRCSP in the southern Sierra Nevada Mountains. The most recent fire in the vicinity of the Park was the 48,000-acre 2016 Erskine Fire, which burned within 14 miles of RRCSP (CAL FIRE 2017).

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Red Rock Canyon State Park

5 Mile Buffer

Spring/Seep

NHD Stream/River

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Riverine

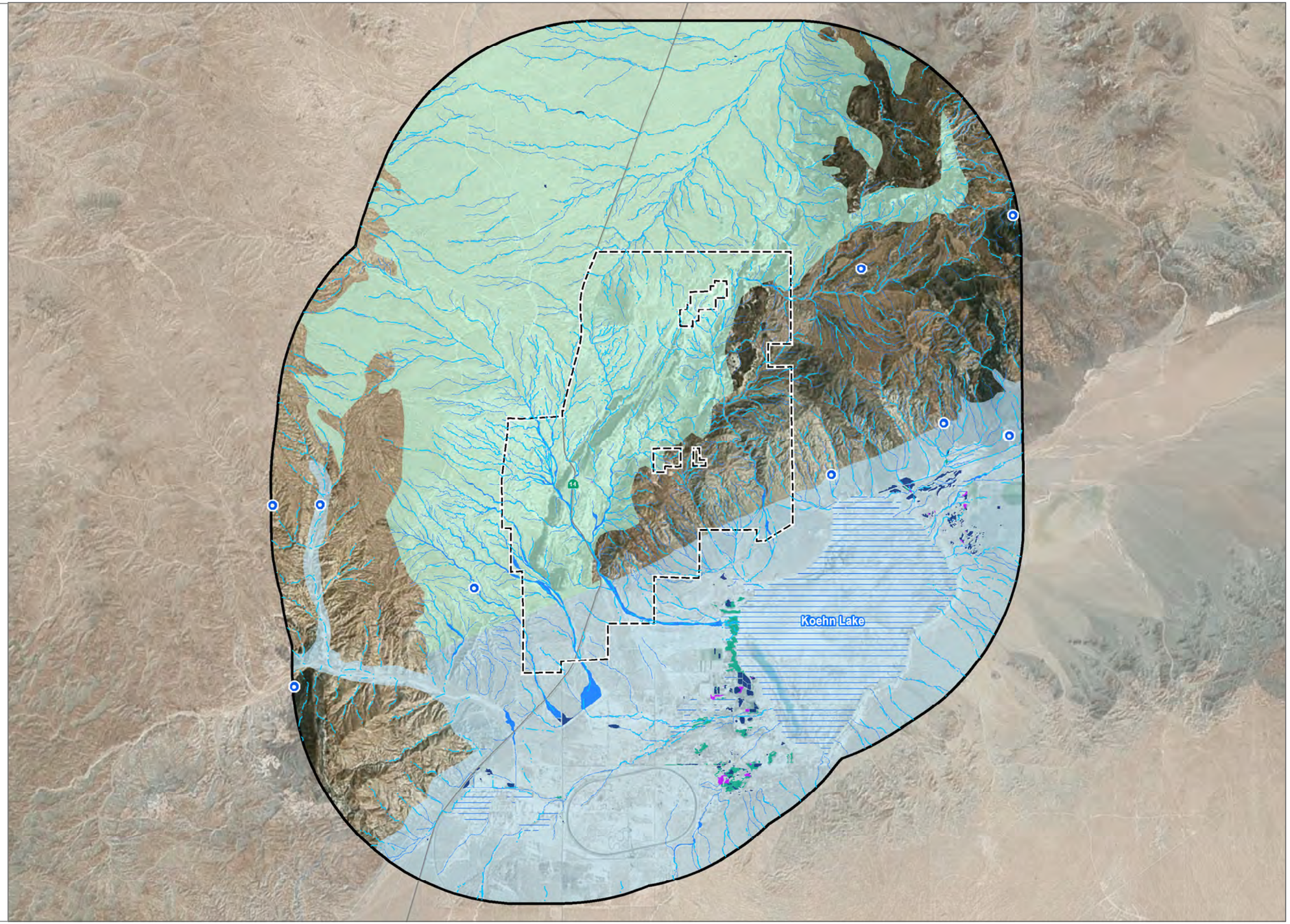
Freshwater Pond

Lake

Groundwater Basins

Fremont Valley

Indian Wells Valley



SOURCE: Bing Maps 2018; USFWS 2018; USGS 2018

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FIGURE 6

Hydrology

Red Rock Canyon State Park - Biological Resources Report

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3 METHODS

The following provides a description of the information sources and methods used to compile and gather information for the Park from a data and literature review and field reconnaissance.

3.1 Literature and Data Review

Dudek conducted an extensive literature and data review of available resources for RRCSP, including relevant data on vegetation communities, plant and wildlife species, landscape processes, and existing biological resources to assist with biological resource surveys.

3.1.1 Statewide and Regional Information

The following statewide and regional information was used as reference and base layers in the preparation of this report.

Vegetation Communities

- *A Manual of California Vegetation* (Sawyer et al. 2009)
- CDFW vegetation mapping of the California deserts (VegCAMP et al. 2013; AIS 2013)

Special Features

- National Hydrography Dataset mapping of hydrological features, including waterbodies, linear water features, and point features (USGS 2010)
- National Wetland Inventory mapping of wetland and riparian features (USFWS 2018)
- Mineral Resources Data System mapping of mines (USGS 2018)

Special-Status Species

- Historic golden eagle nest locations (BLM 2012)
- Desert Renewable Energy Conservation Plan (CEC et al. 2014): Multisource species occurrence dataset and peer-reviewed species distribution models
- USFWS Critical Habitat designations (USFWS 2017): areas of designated critical habitat for federally listed species
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2018a): Occurrence records for special-status species and vegetation communities
- CNPS Rare Plant Inventory (CNPS 2018a): Inventory and status information for rare plants in California

Habitat Linkages

- California Essential Habitat Connectivity project (Spencer et al. 2010)
- Desert Linkage Network (Penrod et al. 2012)
- West Mojave Connectivity Mapping project (CBI 2017)

3.1.2 Park-Specific Studies and Data

The following Park-specific studies and data were used in the preparation of this report.

- *Field Guide to the Geology of Red Rock Canyon and the Southern El Paso Mountains, Mojave Desert, California* (Whistler 1987)
- "Recognition of Cultural Significance at Red Rock Canyon, Kern County, California" (Faull 2000)
- *Red Rock Canyon State Park Resource Inventory, Overview and Status* (DPR 2003)
- "Excavations at the Red Rock Canyon Rock Shelter (CA-KER-147), Western Mojave Desert, California" (Sutton et al. 2006)
- "The Effects of Off-Highway Vehicles on Archaeological Sites and Selected Natural Resources of Red Rock Canyon State Park" (Sampson 2007)
- "Status of the Desert Tortoise in Red Rock Canyon State Park" (Berry et al. 2008)
- *Mohave Ground Squirrel Surveys at Red Rock Canyon State Park, California 2008* (Leitner 2009)
- "The Effects of Off-Highway Vehicles on the Cultural Resources of Red Rock Canyon State Park, California" (Sampson 2009)
- "Revised Miocene Biostratigraphy and Biochronology of the Dove Spring Formation, Mojave Desert, California" (Whistler et al. 2009).
- *Mohave Ground Squirrel Surveys at Red Rock Canyon State Park, California 2010* (Leitner 2010)
- *Special-Status Wildlife Surveys for Renewable Resources' Property Acquisition Project, Kern County, California* (Biosearch Associates 2012)
- *2013 Biological Surveys Summary at Red Rock Canyon State Park, California* (CDFW 2013)
- *2013-2014 Biological Surveys Summary at Red Rock Canyon State Park, California* (CDFW 2014)
- *Red Rock Canyon State Park Nightmare Gulch Route Assessment Report* (DPR 2017)

- *Population Surveys and Seed Banking for Erythranthe rhodopetra (Red Rock Canyon Monkeyflower) in Red Rock Canyon State Park, Kern County, California* (Fraga 2018)
- DPR geographic information system (GIS) datasets: Wildlife occurrence points, plant occurrence points, vegetation communities, and route network.

3.2 Field Reconnaissance

Biological field surveys were conducted by Dudek biologists during spring and summer 2018. Surveys consisted of general biological reconnaissance, vegetation community mapping updates, special features mapping, and plant and wildlife species habitat assessments to document the existing biological resources in the Park. Table 1 summarizes the 2018 field reconnaissance survey dates, personnel, and conditions.

Table 1
2018 Field Reconnaissance Survey Dates, Personnel, and Conditions

Date	Personnel	Survey Time	Air Temp. (°F)	Cloud Cover (%)	Wind Speed (mph)
05/07/2018	BO, MH, KD, SC	0900–1700	74–90	0	3–15
05/08/2018	BO, MH, KD, SC	0830–1711	65–67	0–20	4–10
06/05/2018	KD, SC	1700-1825	89	0	15-25
06/06/2018	KD, SC	0722-1639	71-89	0	2-25
06/07/2018	KD, SC	0555-1406	69-79	0	3-5
06/25/2018	RS, PG	0900-2100	84-99	0	4-8
06/26/2018	RS, PG	0755-1915	78-93	0	11-18

Personnel: BO (Brock Ortega), MH (Mike Howard), KD (Kathleen Dayton), SC (Shana Carey), RS (Russel Sweet), PG (Pedro Garcia)

Additional field reconnaissance was conducted by State Parks staff in 2019 to provide additional information regarding special-status plants and vegetation communities in the Park.

3.2.1 Vegetation Communities and Special Features

Vegetation communities are defined by a vegetation classification scheme based on the plant species growing together with characteristically uniform structures and habitats, consistent species compositions, and recurrence across the landscape (Jennings et al. 2009). RRCSP and the surrounding West Mojave ecoregion have been mapped using the National Vegetation Classification Standard from multiple sources by combining fine-scale alliance-level mapping conducted in 2011, 2012, and 2014 (AIS 2013; VegCAMP et al. 2013). This land cover dataset (referred to as the CDFW West Mojave Vegetation layer) was used as the baseline layer during field reconnaissance. This dataset is hierarchical and vegetation communities can be described at various levels, including at the broad, general vegetation level and the fine-scale alliance-level.

The vegetation alliances are assigned standardized rarity rankings based on the Natural Heritage methodology one to five scale, ranging from critically imperiled (1) to demonstrably secure (5) at global, national, and state scales. Alliances with a state ranking of S1 through S3 are generally considered rare.

Using the CDFW West Mojave Vegetation layer as the base layer, Dudek biologists conducted field verification and refinement to create a Park-specific vegetation community map. Vegetation communities and land cover within RRCSP were mapped in the field using a mobile device application with the CDFW West Mojave Vegetation layer and an aerial photograph and routes of the Park. Following completion of the fieldwork, all edits to the CDFW West Mojave Vegetation layer were digitized using ArcGIS and a GIS coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the Park was determined.

In addition to vegetation community data, National Hydrography Dataset (USGS 2018) and National Wetland Inventory (USFWS 2018) data were used as base layers for wetland and water features during field reconnaissance (see Figure 6). National Hydrography Dataset and National Wetland Inventory data were considered complete and adequate for the mapping of non-wetland channels and other waters in the Park. Dudek biologists did not focus on refining the mapping of non-wetland channels during field reconnaissance, and a formal jurisdictional delineation was not conducted for the Park.

USGS Mineral Resources Data System mines data were used as a base dataset during field reconnaissance. Dudek biologists did not focus on updating or refining the mapping of mines, but used this information to identify potential focal areas of bat activity in the Park.

DPR route network was used as the base dataset for roads and trails in the Park (see Figure 2). Dudek biologists used this road and trail network to access the Park during field reconnaissance but did not focus on updating or refining the mapping of roads or trails. The DPR route network is a line dataset and was used as an overlay with the vegetation community dataset (i.e., routes were not integrated as part of the land cover). Although unauthorized/non-system routes were observed in the field, it was beyond the scope of the 2018 field reconnaissance to comprehensively map the extent of OHV activity in the Park.

3.2.2 Plants

Statewide, regional, and Park-specific studies and data were reviewed by Dudek biologists before conducting field reconnaissance. Available plant species GIS datasets, as listed in Section 3.1, were used as the base layers for special-status plant species during field reconnaissance. Plant species encountered during the field surveys were identified and recorded. Latin and common names for plant species with a California Rare Plant Rank (CRPR; formerly CNPS List) follow

the Inventory of Rare and Endangered Plants (CNPS 2018a). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2018) and common names follow the List of Vegetation Alliances and Associations (CDFG 2010) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2018b). In addition to plant species historically known from the Park or detected during 2018 and 2019 reconnaissance surveys, potential for plant species to occur in the Park was determined based on known habitat preferences of local species and knowledge of their relative distributions in the area.

3.2.3 Wildlife

Statewide, regional, and Park-specific studies and data were reviewed by Dudek biologists before conducting field reconnaissance. Available wildlife species GIS datasets, as listed in Section 3.1, were used as the base layers for special-status wildlife species during field reconnaissance. Wildlife species detected by sight, call, scat, or other sign during the field surveys were identified and recorded. Latin and common names for wildlife species follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU) (2018) for birds, and Wilson and Reeder (2005) for mammals. In addition to wildlife species historically known from the Park or detected during 2018 reconnaissance surveys, potential for wildlife species to occur in the Park was determined based on known habitat preferences of local species and knowledge of their relative distributions in the area.

3.3 Study Limitations

As described in Section 1.1, the purpose of this report is to compile, synthesize, and update the baseline biological resource information for RRCSP. The content of this report was compiled from statewide and regional information, Park-specific studies and data, and field reconnaissance, as described in Sections 3.1 and 3.2.

Statewide and regional information used in this report are all from legitimate, authoritative sources; however, these data have inherent limitations unique to each layer. The statewide/regional scale of the information provided from these sources should be acknowledged. Information from Park-specific studies are limited to the methods used in each study. GIS data for species occurrence records were mapped as centroids, but the species use area and spatial accuracy varies with each record.

Limitations to the 2018 field reconnaissance surveys included season, time of day, accessibility, and survey intensity. Surveys were conducted in May and June 2018. The Park receives the majority its rainfall during the winter months, typical of the Mojave Desert region. The nearest active weather stations to the Park with historical records show an average annual precipitation of

5.93 inches in Mojave, California, and 6.40 inches in Randsburg, California (Western Regional Climate Center 2018). As of August 2018 the Park had only received approximately 1 inch of rainfall for the year. Because temperatures in the summer months can exceed 100°F for days on end, many annual plants in the region bloom in spring and do not persist long into the summer. The short blooming season coupled with high temperatures and limited rainfall this year may have limited the number of annual plant species that germinated this year and/or were able to be detected and identified during field reconnaissance.

Surveys were mainly conducted during diurnal hours; therefore, nocturnal species such as bats could not be identified/detected. Evening emergence observations were conducted in the vicinity of several mines during one evening of the 2018 field reconnaissance; however, the entire Park was not thoroughly surveyed for bats and acoustic techniques were not employed. Bird species identified may have been limited to the season during which surveys were conducted. Nocturnal or fall migrants would not have been detected during surveys. Surveys did not include focused, protocol, or presence-absence surveys for plant or wildlife species, nor did they include formal wetland delineations. Dudek biologists conducted field reconnaissance in all parts of the Park accessible by vehicle or by hiking; however, the surveys did not provide 100% coverage of the entire Park acreage due to areas with limited accessibility or steep, rocky terrain. Documentation of species occupancy and habitat conditions were limited in extremely rugged areas of the park, such as sheer cliffs and steep canyons, due to inaccessibility.

4 RESULTS

The following presents the results of the comprehensive data and literature review and 2018 biological field reconnaissance conducted for RRCSP.

4.1 Vegetation Communities, Land Covers, and Plant Diversity

Vegetation communities and other land covers in the Park include desert scrub communities, riparian communities, wetland communities, desert outcrop and badlands, and developed/disturbed lands (Table 2). The following provides a description of these vegetation communities and other land covers in RRCSP. Figure 7 shows the vegetation communities and land covers mapped in the Park. Detailed maps of the vegetation community mapping are provided in the Biological Resources Mapbook presented in Appendix A. The list of plant species observed in the Park is presented in Appendix B.

Table 2
Vegetation Communities and Land Covers

General Vegetation Vegetation Alliance	**Park Acreage**
Desert Scrub	**21,777**
Ambrosia dumosa (white bursage scrub)	1,328
Atriplex confertifolia (shadscale scrub)	35
Atriplex polycarpa (allscale scrub)	797
Coleogyne ramosissima (black brush scrub)	51
Grayia spinosa (spiny hop sage scrub)	549
Krascheninnikovia lanata (winterfat scrub)*	573
Larrea tridentata (creosote bush scrub)	811
Larrea tridentata - Ambrosia dumosa (creosote bush – white bursage scrub)	17,316
Salazaria mexicana (bladder sage scrub)	15
Yucca brevifolia (Joshua tree woodland)*	301
Riparian	**673**
Ambrosia salsola (cheesebush scrub)	112
Ericameria paniculata (black-stem rabbitbrush scrub)*	82
Lepidospartum squamatum (scale broom scrub)*	452
Madrean Warm Semi-Desert Wash Woodland/Scrub	24
Salix laevigata (red willow thickets)*	2
Wetland	**2**
*Juncus arcticus (*var. *balticus, mexicanus*; Baltic and Mexican rush marshes*)*	2
Desert Outcrop and Badlands	**2,821**
North American warm desert bedrock cliff and outcrop	2,821
Other Land Cover	**79**
Developed	76

Table 2
Vegetation Communities and Land Covers

General Vegetation Vegetation Alliance	Park Acreage
Disturbed	3
Park Total	**25,351**

Notes: Vegetation communities and land cover based on the CDFW West Mojave Vegetation layer (AIS 2013; VegCAMP et al. 2013) with Park-specific mapping refinements based on 2018 and 2019 field reconnaissance.
* Vegetation communities with state rarity ranking of S1–S3. These are discussed further in Section 4.3.1.

4.1.1 Desert Scrub Communities

***Ambrosia dumosa* (White Bursage Scrub)**

The *Ambrosia dumosa* shrubland alliance (white bursage scrub) has white bursage (*Ambrosia dumosa*) as the dominant or co-dominant shrub in the canopy. This alliance has an open to intermittent canopy and is less than 1 meter (3 feet) in height with an open to intermittent ground layer in which annuals are seasonally present (CNPS 2018b).

Species associated with the *Ambrosia dumosa* shrubland alliance include saltbushes (*Atriplex* spp.), teddy-bear cholla (*Cylindropuntia bigelovii*), Death Valley ephedra (*Ephedra funerea*), brittlebush (*Encelia farinosa*), creosote bush (*Larrea tridentata*), beavertail cactus (*Opuntia basilaris*), and ocotillo (*Fouquieria splendens*) (CNPS 2018b). The *Ambrosia dumosa* shrubland alliance often occurs on older washes and river terraces, alluvial fans, bajadas, and upland slopes. Soils on which this alliance occurs are sandy, clay-rich, or calcareous and may have pavement surface (CNPS 2018b). The *Ambrosia dumosa* shrubland alliance is ranked by the CDFW (2018b) as a G5S5 alliance. This ranking indicates that the alliance is secure globally and within California.

On site, the *Ambrosia dumosa* shrubland alliance occurs primarily in the western and northeastern portion of the Park (Figure 7). This community includes cheesebush, creosote bush, allscale, desert pepperweed, bladder sage, Nevada jointfir, shadscale, and Arabian shismus as associated species.

***Atriplex confertifolia* (Shadscale Scrub)**

The *Atriplex confertifolia* shrubland alliance (shadscale scrub) includes shadscale (*Atriplex confertifolia*) as the dominant or co-dominant shrub in the canopy. Shadscale has at least 2% absolute cover in the shrub canopy with no other species having greater cover, except woody subshrubs such as ratany (*Krameria* spp.). This alliance has an open to continuous canopy and is less than 1 meter (3 feet) in height with a sparse to abundant herbaceous layer (CNPS 2018b).

Red Rock Canyon State Park

Mines

Vegetation Communities

Desert Scrub

- Ambrosia dumosa
- Atriplex confertifolia
- Atriplex polycarpa
- Coleogyne ramosissima
- Grayia spinosa
- Krascheninnikovia lanata
- Larrea tridentata
- Larrea tridentata - Ambrosia dumosa
- Salazaria mexicana
- Yucca brevifolia

Riparian

- Ambrosia salsola
- Ericameria paniculata
- Lepidospartum squamatum
- Madrean Warm Semi-Desert Wash Woodland/Scrub
- Salix laevigata

Wetland

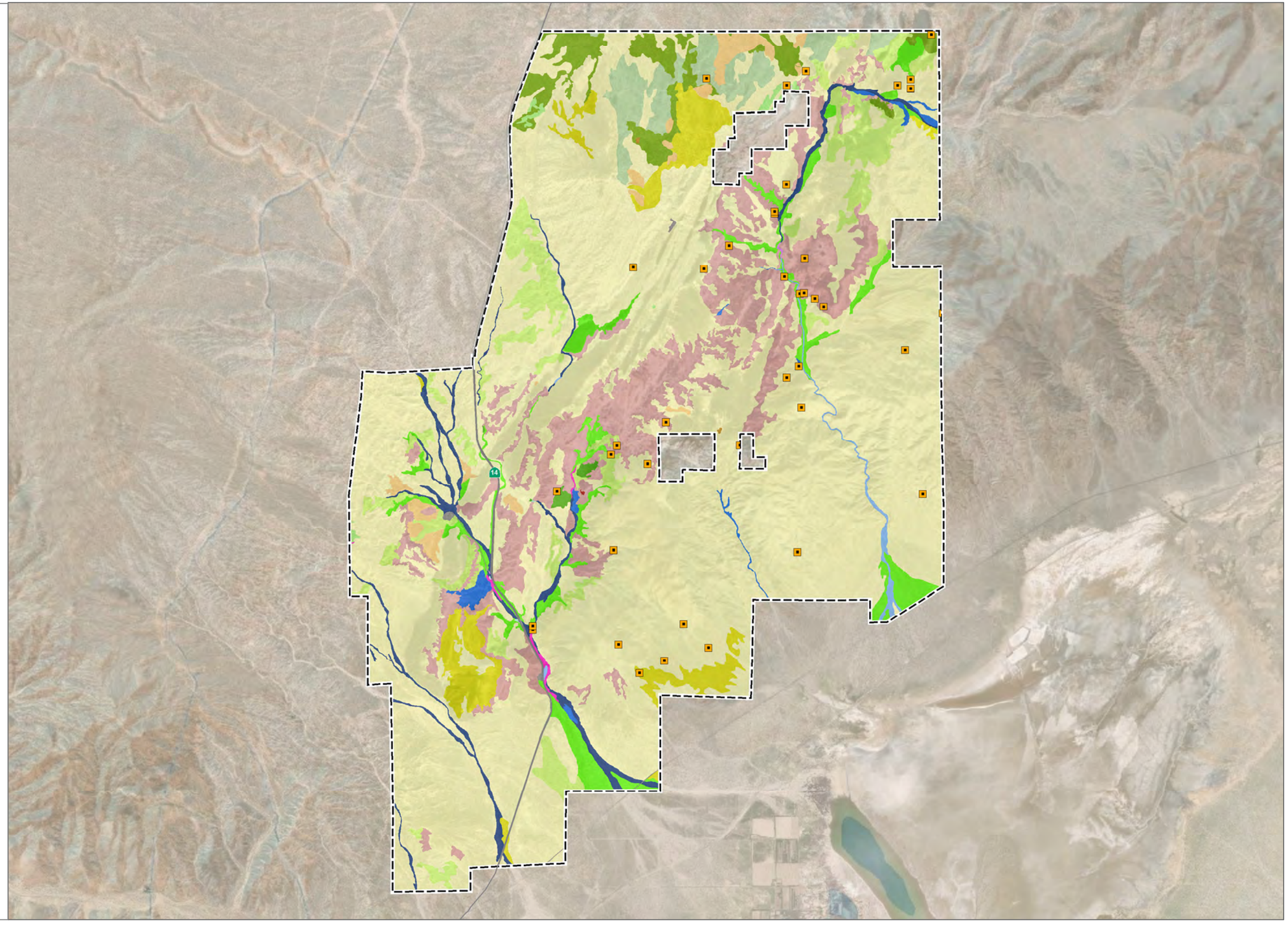
- Juncus arcticus (var. balticus, mexicanus)

Desert Outcrop and Badlands

- Atriplex polycarpa
- North American warm desert bedrock cliff and outcrop

Other Land Cover

- Urban
- Disturbed



SOURCE: Bing Maps 2018; CDFW 2018

DUDEK

0 0.5 1 Miles

FIGURE 7

Vegetation and Special Features

Red Rock Canyon State Park - Biological Resources Report

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Some species associated with the *Atriplex confertifolia* shrubland alliance include white bursage, allscale (*Atriplex polycarpa*), spinescale (*A. spinifera*), sticky-flowered rabbitbrush (*Chrysothamnus viscidiflorus*), black brush (*Coleogyne ramosissima*), Acton's brittlebush (*Encelia actoni*), Virgin River brittlebush (*Encelia virginensis*), Nevada joint fir (*Ephedra nevadensis*), Heermann's buckwheat (*Eriogonum heermannii*), and spiny hop sage (*Grayia spinosa*) (CNPS 2018b). The *Atriplex confertifolia* shrubland alliance occurs on alluvial fans, flats, lower slopes, rocky hills, valleys, small shallow channels, washes, and playas edges. Soils on which this alliance occurs are variable (CNPS 2018b). The *Atriplex confertifolia* shrubland alliance is ranked by the CDFW (2018b) as a G5S4 alliance. This ranking indicates that the alliance is secure globally and apparently secure within California.

The *Atriplex confertifolia* shrubland alliance occurs in Scenic Canyon (Figure 7). Based on vegetation sampling conducted during fieldwork, this alliance in the Park includes shadscale and allscale as co-dominant with creosote bush and white bursage as important species.

***Atriplex polycarpa* (Allscale Scrub)**

The *Atriplex polycarpa* shrubland alliance (allscale scrub) includes allscale as the dominant shrub in the canopy. Allscale has more than 2% absolute cover and more than 50% relative cover in the shrub canopy. Allscale scrub has an open to continuous shrub canopy less than 3 meters (10 feet) in height with a variable herbaceous layer (CNPS 2018b).

Species associated with the *Atriplex polycarpa* shrubland alliance include white bursage, cheesebush (*Ambrosia salsola*), four-winged saltbush (*Atriplex canescens*), Big Bend spurge (*Euphorbia polycarpa*), bladderpod (*Peritoma arborea*), alkali goldenbush (*Isocoma acradenia*), and creosote bush. Emergent trees, such as honey mesquite (*Prosopis glandulosa*), may also be present at a low cover (CNPS 2018b). The *Atriplex polycarpa* shrubland alliance occurs on dissected alluvial fans, rolling hills, washes, playas, and terraces. Soils may be carbonate-rich, alkaline, sandy, or sandy clay loams (CNPS 2018b). The *Atriplex polycarpa* shrubland alliance is ranked by the CDFW (2018b) as a G4S4 alliance. This ranking indicates that the alliance is apparently secure both globally and in California.

In the Park, the *Atriplex polycarpa* shrubland alliance occurs around Park Headquarters, in Hagen Canyon and southeast of Hagen Canyon east of SR-14, along Scenic Canyon, at the southern end of Last Chance Canyon, east of Nightmare Gulch, and along the washes around Cudahy Camp (Figure 7). Based on the vegetation sampling collected during fieldwork in the Park, this community includes an important component of black-stem rabbitbrush (*Ericameria paniculata*), cheesebush, and Nevada jointfir. Associated species with less cover include white bursage, peach thorn (*Lycium cooperi*), California buckwheat, scale broom (*Lepidospartum squamatum*), and threadleaf snakeweed (*Gutierrezia microcephala*). The herbaceous layer includes redstem stork's

bill (*Erodium cicutarium*), sowthistle desertdandelion (*Malacothrix sonchoides*), seaside heliotrope (*Heliotropium curassavicum* var. *oculatum*), Booth's evening primrose (*Eremothera boothii*), chia (*Salvia columbariae*), and Arabian schismus.

***Coleogyne ramosissima* (Black Brush Scrub)**

The *Coleogyne ramosissima* shrubland alliance (black brush scrub) includes black brush as the dominant or co-dominant shrub in the canopy. Black brush has at least 2% absolute cover in the shrub canopy. Nevada joint fir and/or white ratany (*Krameria grayi*) may have twice the cover of black brush. Cheesebush, bladder sage (*Scutellaria mexicana*; previously *Salazaria mexicana*), rabbitbrush (*Ericameria* spp.), or California buckwheat (*Eriogonum fasciculatum*), may exceed the cover of black brush, especially in disturbed settings. Black brush scrub has an open to continuous shrub canopy less than 2 meters (7 feet) in height with a variable herbaceous layer with cryptogrammic crusts (CNPS 2018b).

Species associated with the *Coleogyne ramosissima* shrubland alliance include big sagebrush (*Artemisia tridentata*), shadscale, ephedras (*Ephedra* spp.), needleleaf rabbitbrush (*Ericameria teretifolia*), California buckwheat, spiny hop sage, winterfat (*Krascheninnikovia lanata*), and creosote, among others. Emergent trees, such as junipers (*Juniperus california, J. osteosperma*), singleleaf pinyon (*Pinus monophylla*), and Joshua tree (*Yucca brevifolia*), may also be present at a low cover (CNPS 2018b). The *Coleogyne ramosissima* shrubland alliance occurs on alluvial fans, slopes, and rocky highlands. Soils are thin and sandy with exposed rock (CNPS 2018b). The *Coleogyne ramosissima* shrubland alliance is ranked by the CDFW (2018b) as a G5S4 alliance. This ranking indicates that the alliance is secure globally and apparently secure in California.

In the Park, the *Coleogyne ramosissima* shrubland alliance occurs along the western boundary of the Park east of Park Headquarters, northwest of Opal Peak, northwest of Nightmare Gulch, and just north of private land in the northern portion of the Park (Figure 7). Based on the vegetation sampling collected during fieldwork in the Park, this community includes black brush as a dominant species, with lesser components of cheesebush, peach thorn, California buckwheat, and Cooper's goldenbush (*Ericameria cooperi*).

***Grayia spinosa* (Spiny Hop Sage Scrub)**

The *Grayia spinosa* shrubland alliance (spiny hop sage scrub) is not recognized by CDFW (2018b), but is described in the *2013 California Vegetation Map in Support of the Desert Renewable Energy Conservation Plan* (Menke et al. 2013). This alliance is dominated or co-dominated by spiny hop sage, which attains at least 2% absolute cover in the shrub layer. No other

species have substantially greater cover, but several co-dominant species may be present (Menke et al. 2013).

Associated species include Mojave cottonthorn (*Tetradymia stenolepis*), Cooper's goldenbush (*Ericameria cooperi*), peach thorn, desert pepperweed (*Lepidium fremontii*), desert senna (*Senna armata*), Anderson's boxthorn (*Lycium andersonii*), bladder sage, and Acton's brittlebush (Menke et al. 2013). The *Grayia spinosa* shrubland alliance occurs on north-facing slopes, middle and upper slopes that are gently sloping to moderately steep, mid-slopes, lower basins, basin margins, and cold-air drainages. Soils are relatively well-drained and medium-textured (Menke et al. 2013). Because the *Grayia spinosa* shrubland alliance is not included in CDFW (2018b), it is not assigned an official rarity ranking. However, the CDFW West Mojave Vegetation layer did not consider this alliance rare. Therefore, it is assumed that the *Grayia spinosa* shrubland alliance would not be considered a sensitive alliance.

The *Grayia spinosa* shrubland alliance occurs in the northeastern portion of the Park (Figure 7). Based on vegetation sampling conducted in the Park, spiny hop sage was dominant in this community with Nevada jointfir, white bursage, and California buckwheat as associated species.

***Krascheninnikovia lanata* (Winterfat Scrubland)**

The *Krascheninnikovia lanata* shrubland alliance (winterfat scrubland) is dominated or co-dominated by winterfat with more than 50% relative cover in the shrub canopy with no other species exceeding its cover. The canopy is open to continuous and herbaceous layer is open or grassy (CNPS 2018b).

Species associated with this alliance include black sagebrush (*Artemisia nova*), shadscale, sticky-flowered rabbitbrush, black brush, and bud sagebrush (*Picrothamnus desertorum*) (CNPS 2018b). The *Krascheninnikovia lanata* shrubland alliance occurs on alkaline flats, plains, and old lakebeds. Soils are silty clay loams that are calcareous, moderately alkaline, and sometimes saline (CNPS 2018b). The *Krascheninnikovia lanata* shrubland alliance is ranked by the CDFW (2018b) as a G4S3 alliance. This ranking indicates that globally the alliance is apparently secure, but is vulnerable within California and is, therefore, considered sensitive.

The *Krascheninnikovia lanata* shrubland alliance occurs in the northeastern portion of the Park (Figure 7). Based on the vegetation sampling conducted this alliance includes fourwing saltbush, creosote bush, cheesebush, desert trumpet, and peach thorn as associated species.

***Larrea tridentata* (Creosote Bush Scrub)**

The *Larrea tridentata* shrubland alliance (creosote bush scrub) includes creosote bush as the dominant or co-dominant shrub in the canopy. This alliance has an intermittent to open shrub

canopy less than 3 meters (10 feet) in height with an open to intermittent ground layer in which annuals or perennial grasses are seasonally present (CNPS 2018b).

Species associated with the creosote bush scrub alliance include Shockley's golden head (*Acamptopappus shockleyi*), white bursage, woolly brickellbush (*Brickellia incana*), ephedras, saltbushes, and brittlebush. Joshua tree and honey mesquite may be present at a low cover (CNPS 2018b). The *Larrea tridentata* shrubland alliance often occurs on alluvial fans, minor intermittent washes, and upland slopes. Soils on which this alliance occurs are well-drained and may have pavement surface (CNPS 2018b). The *Larrea tridentata* shrubland alliance is ranked by the CDFW (2018b) as a G5S5 alliance. This ranking indicates that the alliance is secure both globally and within California.

Within the Park, the *Larrea tridentata* shrubland alliance occurs east of Hagen Canyon, along the southeastern Park boundary, and near Opal Peak in the northern portion of the Park (Figure 7). Based on the vegetation sampling conducted, creosote bush was the most consistent shrub in a diverse stand including cheesebush, shadscale, winterfat, and less than 1% of Joshua tree.

***Larrea tridentata–Ambrosia dumosa* (Creosote Bush–White Bursage Scrub)**

The *Larrea tridentata–Ambrosia dumosa* (creosote bush–white bursage scrub) alliance includes creosote bush and white bursage as co-dominant shrubs in the canopy, each with more than 1% absolute cover, and both creosote bush and white bursage exceeding twice the cover of other shrub species. This alliance has a two-tiered shrub canopy less than 3 meters (10 feet) in height with an absent to intermittent ground layer in which annuals are seasonally present (CNPS 2018b).

Species associated with the creosote bush–white bursage scrub alliance include chaffbush (*Amphipappus fremontii*), saltbushes, sweetbush (*Bebbia juncea*), California croton (*Croton californicus*), brittlebush, ephedras, Anderson's boxthorn, dalea (*Psorothamnus* spp.), bladder sage, and desert senna. Emergent Joshua tree or ocotillo may also be present at a low cover (CNPS 2018b). The creosote bush–white bursage scrub alliance is often located in washes and rills, on alluvial fans, valleys, basins, mesas, and upland slopes. Soils on which this alliance occurs are well-drained, alluvial, colluvial, sandy, and may have desert pavement surface (CNPS 2018b). The creosote bush–white bursage scrub alliance is ranked by the CDFW (2018b) as a G5S5 alliance. This ranking indicates that the alliance is considered secure both globally and within California.

The *Larrea tridentata–Ambrosia dumosa* shrubland alliance occurs throughout the vast majority of the Park (Figure 7). Because this community was the most common in the Park, several associated species were present. Based on limited sampling, cheesebrush, desert trumpet, Nevada jointfir, and allscale were commonly associated species.

Salazaria mexicana (Bladder Sage Scrub)

The *Salazaria mexicana* alliance (bladder sage scrub) is not recognized by CDFW (2018b), but is described in the *2013 California Vegetation Map in Support of the Desert Renewable Energy Conservation Plan* (Menke et al. 2013). This alliance is dominated or co-dominated by bladder sage, which comprises more than 2% cover in the shrub layer. Other species have less than half the cover of bladder sage with the exception of desert lavender (*Hyptis emoryi*), dessert senna, or purple sage (*Salvia dorrii*), which may have equal or higher cover. Other associated species include cheesebush, sweetbush, California buckwheat, Acton's brittlebush, Nevada jointfir, and needleleaf rabbitbrush (Menke et al. 2013).

The *Salazaria mexicana* alliance occurs on sandy or gravelly washes, and disturbed steep and rocky uplands. Soils are often granitic or composed of crystalline non-calcareous metamorphic material (Menke et al. 2013). Because the *Salazaria mexicana* shrubland alliance is not included in CDFW (2018b), it is not assigned an official rarity ranking. However, the *Larrea tridentata–Ambrosia dumosa–Salazaria mexicana* association within the *Larrea tridentata–Ambrosia dumosa* shrubland alliance is not considered sensitive. Therefore, it is assumed that the *Salazaria mexicana* alliance would also not be considered a sensitive alliance.

The *Salazaria mexicana* shrubland alliance occurs in a single stand in the Park, along the eastern boundary south of Last Chance Canyon Road (Figure 7). Based on vegetation sampling conducted, this alliance was mapped as a diverse stand consisting of bladder sage, cheesebush, spiny hop sage, Nevada jointfir, white bursage, California buckwheat, and allscale, as well as lesser components of winterfat and Johnson's indigobush.

Yucca brevifolia (Joshua Tree Woodland)

The *Yucca brevifolia* (Joshua tree) woodland alliance includes evenly distributed Joshua trees with at least 1% absolute cover in the tree canopy. Cover of junipers (*Juniperus* spp.) and pines (*Pinus* spp.) totals less than 1% absolute cover. This alliance has an open to intermittent canopy less than 14 meters (46 feet) in height with an open to intermittent shrub layer and open to intermittent herbaceous layer (CNPS 2018b).

Species associated with the *Yucca brevifolia* woodland alliance include white bursage, cheesebush, big sagebrush, sticky-flowered rabbitbush, black brush, buck-horn cholla (*Cylindropuntia acanthocarpa*), Nevada jointfir, California buckwheat, threadleaf snakeweed (*Gutierrezia microcephala*), winterfat, creosote bush, Anderson's boxthorn, and yuccas (*Yucca baccata, Y. schidigera*) (CNPS 2018b). The *Yucca brevifolia* woodland alliance is often found on alluvial fans, ridges, and on gentle to moderate slopes. Soils on which this alliance occurs are coarse sands, very fine silts, gravel, or sandy loams. Soils may be bimodal with both coarse sands and fine silts (CNPS

2018b). The *Yucca brevifolia* woodland alliance is ranked by the CDFW (2018b) as a G4S3 alliance. This ranking indicates that the alliance is considered apparently secure globally, but vulnerable within California and therefore is considered sensitive.

Within the Park, the *Yucca brevifolia* woodland alliance occurs around Park Headquarters and northeast of Park Headquarters, south of Nightmare Gulch, and around and northeast of Opal Peak (Figure 7). Based on the vegetation sampling collected during the fieldwork , Joshua tree is not present at high cover in this community, but is consistent in the stand. Creosote bush and white bursage are important shrubs. Johnson's indigobush (*Psorothamnus arborescens* var. *minutifolius*) and California buckwheat are present at lower cover. The herbaceous layer includes Arabian schismus, chia, and common fiddleneck (*Amsinckia intermedia*).

4.1.2 Riparian Communities

***Ambrosia salsola* (Cheesebrush Scrub)**

The *Ambrosia salsola* (cheesebush scrub) alliance is not recognized by CDFW (2018b), but is described in the *2013 California Vegetation Map in Support of the Desert Renewable Energy Conservation Plan* (Menke et al. 2013). This alliance is strongly dominated by cheesebush, with at least 60% relative cover in the shrub layer. However, desert senna may be present at equal or higher cover in some stands of this alliance (Menke et al. 2013).

The *Ambrosia salsola* alliance occurs on washes or on gently sloping disturbed uplands (Menke et al. 2013). Because the *Ambrosia salsola* alliance is not included in CDFW (2018b), it is not assigned an official rarity ranking. However, the *Ambrosia salsola* association within the *Ambrosia salsola–Bebbia juncea* alliance is not considered sensitive. Therefore, it is assumed that the *Ambrosia salsola* alliance would also not be considered a sensitive alliance.

Within the Park, the *Ambrosia salsola* alliance occurs southwest of the Park headquarters, along the wash east of Highway 14 in the southern portion of the Park, in Scenic Canyon, along Nightmare Gulch, Last Chance Canyon, a wash west of Last Chance Canyon, and along Last Chance Canyon Road in the northeastern portion of the Park (Figure 7). Based on vegetation sampling in the Park, this community includes the following associated species: creosote bush, shadscale, allscale, desert pepperweed, desert trumpet (*Eriogonum inflatum*), and Arabian shismus.

***Ericameria paniculata* (Black-Stem Rabbitbrush Scrub)**

The *Ericameria paniculata* shrubland (black-stem rabbitbrush scrub) alliance includes black-stem rabbitbrush as a dominant or co-dominant shrub in the canopy with more than 5% cover of black-stem rabbitbrush. Additionally, no other shrub has more than 50% relative cover in the canopy and

trees are less than 2% absolute cover. This alliance has an open to closed canopy less than 5 meters (16 feet) in height with an open herbaceous layer composed of seasonal annuals (CNPS 2018b).

Species associated with the *Ericameria paniculata* shrubland alliance include woolly fruit bur ragweed (*Ambrosia eriocentra*), cheesebush, woolly bricklebush, coyote gourd (*Cucurbita palmata*), brittlebush, Virgin River brittlebush, ephedras, California buckwheat and purple sage (CNPS 2018b). This alliance often occurs in intermittently flooded arroyos, channels, and washes. Soils are usually well-drained coarse to fine sand (CNPS 2018b). The *Ericameria paniculata* shrubland alliance is ranked by the CDFW (2018b) as a G4S3 alliance. This ranking indicates that the alliance is considered apparently secure globally, but vulnerable within California and therefore is considered sensitive.

On site, the *Ericameria paniculata* shrubland alliance occurs along Last Chance Canyon in the southeastern portion of the Park (Figure 7). Based on vegetation sampling conducted during the fieldwork, this alliance was mapped along washes where black-stem rabbitbush was dominant and allscale was an important species. Scale broom, cheesebush, and sweetbush were also present at less than 1% absolute cover.

***Lepidospartum squamatum* (Scale Broom Scrub)**

The *Lepidospartum squamatum* shrubland (scale broom scrub) alliance includes scale broom as a dominant, co-dominant, or conspicuous shrub in the canopy with more than 1% absolute cover. This alliance has an open to continuous two-tiered canopy less than 2 meters (7 feet) in height with a variable herbaceous layer (CNPS 2018b).

Species associated with the *Lepidospartum squamatum* shrubland alliance include cheesebush, California sagebrush (*Artemisia californica*), mulefat (*Baccharis salicifolia*), bladderpod, California cholla (*Cylindropuntia californica*), brittlebush, yerba santa (*Eriodictyon crassifolium, E. trichocalyx*), California buckwheat, chaparral yucca (*Hesperoyucca whipplei*), and deer weed (*Acmispon glaber*), among others. Emergent trees may also be present at low cover (CNPS 2018b). This alliance occurs in the low-gradient alluvial deposits along streams, washes, and fans that are intermittently or rarely flooded (CNPS 2018b). The *Lepidospartum squamatum* shrubland alliance is ranked by the CDFW (2018b) as a G3S3 alliance. This ranking indicates that the alliance is vulnerable both globally and within California and therefore is considered sensitive.

Within the Park, the *Lepidospartum squamatum* shrubland alliance occurs along several drainages and washes, but primarily in the western portion of the Park (Figure 7). Based on the vegetation sampling collected during fieldwork, scale broom scrub includes black-stem rabbitbrush, allscale, and cheesebush. Subshrubs at lower cover include desert pepperweed and brownplume wirelettuce (*Stephanomeria pauciflora*). The herbaceous layer includes Arabian shismus and desert trumpet.

Madrean Warm Semi-Desert Wash Woodland/Scrub

Madrean warm semi-desert wash woodland/scrub is a macrogroup in the California manual of vegetation, which corresponds to the level of vegetation that includes groups and sets of alliances within those groups. This higher level was mapped where stands were dominated by unvegetated wash and river bottoms in the Park. Madrean warm semi-desert wash woodland/scrub occurs along the wash that runs along SR-14 and in Scenic Canyon (Figure 7).

***Salix laevigata* (Red Willow Thickets)**

The *Salix laevigata* woodland (red willow thickets) alliance includes red willow (*Salix laevigata*) as the dominant or co-dominant tree or shrub in the canopy. This alliance has an open to continuous tree canopy less than 20 meters (66 feet) in height with an open to continuous shrub layer and variable herbaceous layer (CNPS 2018b).

Species associated with the *Salix laevigata* woodland alliance include box-elder (*Acer negundo*), California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), pines (*Pinus jeffreyi, P. sabiniana*), California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), oaks (*Quercus agrifolia, Q. chrysolepis*), willows (*Salix gooddingii, S. lasiolepis, S. lucida* ssp. *lasiandra*), and blue elderberry (*Sambucus nigra*) (CNPS 2018b). This alliance occurs on floodplains and lake edges and in ditches and low-gradient depositions along streams (CNPS 2018b). The *Salix laevigata* woodland alliance is ranked by the CDFW (2018b) as a G3S3 alliance. This ranking indicates that the alliance is vulnerable both globally and within California and therefore is considered sensitive.

The *Salix laevigata* woodland alliance occurs in a small stand just west of SR-14 and north of Cudahy Camp (Figure 7). At the stand north of Cudahy Camp, red willow was the dominant tree, but Fremont cottonwood was also present. In the shrub layer, scale broom was dominant, with herbaceous layer was dominated by Baltic rush (*Juncus arcticus* var. *balticus*).

4.1.3 Wetland Communities

***Juncus arcticus* (var. *balticus, mexicanus*) (Baltic and Mexican Rush Marshes)**

The *Juncus arcticus* (var. *balticus, mexicanus*) herbaceous alliance (Baltic and Mexican rush marshes) includes Baltic rush or Mexican rush (*Juncus arcticus* var. *balticus* or *Juncus arcticus* var. *mexicanus*) as dominant or co-dominant in the herbaceous layer. This alliance has an intermittent to continuous canopy less than 1 meter (3 feet) in height (CNPS 2018b).

Species associated with the *Juncus arcticus (*var. *balticus, mexicanus)* herbaceous alliance include sturdy bulrush (*Bolboschoenus robustus*), ripgut brome (*Bromus diandrus*), sedges (*Carex* spp.),

poison hemlock (*Conium maculatum*), salt grass (*Distichlis spicata*), needle spike rush (*Eleocharis acicularis*), rushes (*Juncus effusus, J. phaeocephalus*), perennial pepper weed (*Lepidium latifolium*), common threesquare (*Schoenoplectus pungens*), and alkali sacaton (*Sporobolus airoides*), among others. Emergent trees and shrubs may occur at low cover (CNPS 2018b). This alliance occurs in wet and mesic meadows, along stream banks, rivers, lakes, and ponds. Marsh habitats can be fresh, brackish, or alkaline. Soils are poorly drained and often have a thick organic layer (CNPS 2018b). The *Juncus arcticus (*var. *balticus, mexicanus)* herbaceous alliance is ranked by the CDFW (2018b) as a G5S4 alliance. This ranking indicates that the alliance is considered secure globally and apparently secure within California.

Within the Park, the *Juncus arcticus (*var. *balticus, mexicanus)* herbaceous alliance occurs in three stands, two of which are just west of SR-14 and one that occurs at a seep west of Scenic Canyon (Figure 7). Based on vegetation sampling conducted during fieldwork, this community was strongly dominated by Baltic rush, with southern cattail (*Typha domingensis*) also present. Additionally, the following species were documented at very low cover: flatspine bur ragweed (*Ambrosia acanthicarpa*), seaside heliotrope, fourwing saltbush (*Atriplex canescens*), red willow, Washington fan palm (*Washingtonia robusta*), and honey mesquite.

4.1.4 Desert Outcrop and Badlands

North American Warm Desert Bedrock Cliff and Outcrop

North American warm desert bedrock cliff and outcrop is a group in the California manual of vegetation, which corresponds to the level above alliances. This higher level was mapped where stands were dominated by largely unvegetated slopes. These areas occur throughout the Park, especially along Hagen Canyon, Scenic Canyon, Nightmare Gulch, and along Last Chance Canyon Road (Figure 7). Based on vegetation sampling conducted during fieldwork, a low cover of creosote bush and Arabian schismus occur in these areas.

4.1.5 Other Land Cover

Urban

Urban refers to land in which the ground layer has been altered such that vegetation is no longer sustainable. For example, paved roads, concrete pads, and buildings would all constitute urban development. Urban areas include the Park Headquarters, Opal Camp, SR-14, and Redrock Randsburg Road (Figure 7).

Disturbed

Disturbed land refers to land that has been subject to anthropogenic disturbance and is largely devoid of vegetation, though some non-native annuals may be present. Disturbed areas occur northeast of Opal Peak and in previously mined areas just north of private land west of Last Chance Canyon (Figure 7). The primitive road network (see Figure 2) would be considered disturbed land; however, these dirt roads were not captured at the resolution of the vegetation mapping.

4.1.6 Plant Diversity

The Mojave Desert in California has about 1,409 native taxa. Compared to 709 native taxa in the Colorado/Sonoran Desert, the higher level of plant diversity in the Mojave Desert reflects the greater climatic and elevation diversity of this region (Baldwin et al. 2002). Approximately 600 species have been recorded in the Red Rock Canyon State Park region per the Calflora database (Calflora 2018). Appendix B lists the plant species recorded within the Park during the 2018 surveys.

4.2 Wildlife Diversity

The Park is characterized by desert scrub, riparian and wetland, and outcrop and cliff habitats that can support a variety of wildlife species. The wildlife diversity of RRCSP has been previously studied and documented in the specific studies and data cited in Section 3.1.2. During the 2018 field reconnaissance, 35 wildlife species were observed in the Park. A cumulative list of wildlife species observed during these surveys is provided in Appendix C.

A brief discussion of the general reptile, bird, and mammal diversity observed in the Park during the 2018 field reconnaissance is provided below; amphibian, fish, and invertebrate species were not detected in the Park.

Reptiles

Nine reptile species were observed in the Park during the 2018 surveys (Appendix C). Commonly observed reptiles included the common side-blotched lizard (*Uta stansburiana*), desert horned lizard (*Phrynosoma platyrhinos*), and zebra-tailed lizard (*Callisaurus draconoides*). Other reptiles, such as the desert spiny lizard (*Sceloporus magister*) and western whiptail (*Cnemidophorus tigris*), have also been previously documented at the Park (CDFW 2014). Special-status reptile species, including desert tortoise (*Gopherus agassizii*), are discussed in Section 4.3.3.

Birds

Twenty-two bird species were observed in the Park during the 2018 surveys (Appendix C). Commonly observed birds included the black-throated sparrow (*Amphispiza bilineata*), mourning dove (*Zenaida macroura*), and common raven (*Corvus corax*). Other common bird species have been previously reported at the Park include rock wren (*Salpinctes obsoletus*), horned lark (*Eremophila alpestris*), Wilson's warbler (*Cardellina pusilla*), sage sparrow (*Amphispiza belli*), white-throated swift (*Aeronautes saxatalis*), and red-tailed hawk (*Buteo jamaicensis*) (CDFW 2014). Special-status bird species, including riparian birds, scrub birds, and golden eagle (*Aquila chrysaetos*) and other raptors, are discussed in Section 4.3.3.

Mammals

Four mammal species were detected in the Park during the 2018 surveys (Appendix C). Commonly observed mammals included the white-tailed antelope squirrel *(Ammospermophilus leucurus)* and black-tailed jackrabbit *(Lepus californicus).* Additionally, unidentified bat species were detected during the 2018 reconnaissance. Other common mammal species that have been previously reported at the Park include Merriam's kangaroo rat (*Dipodomys merriami*), long-tailed pocket mouse (*Chaetodipus formosus*), and deer mouse (*Peromyscus sp.*) (CDFW 2014). Special-status mammal species, including Mohave ground squirrel (*Xerospermophilus mohavensis*), bat species, and other small mammal and furbearers, are discussed in Section 4.3.3.

4.3 Special-Status Resources

For the purposes of this Biological Resources Report, special-status resources refers to (1) the biological resources typically regulated or protected by federal, state, and local laws and policies (see Section 1.3), and (2) any other biological resources of interest in the region or Park itself.

4.3.1 Sensitive Vegetation Communities

Wetlands and Waters

Collectively, wetlands and waters refers to riparian vegetation communities, wetland vegetation communities, and non-wetland water features (e.g., unvegetated washes and braided channels) that provide habitat value and hydrologic connectivity functions. As outlined in Section 4.1, the Park supports approximately 649 acres of riparian communities and 2 acres of wetland communities. As described in Section 2.6, the Park also contains numerous unvegetated washes and channels within upland vegetation communities, as represented in Figure 6. These wetlands and waters features provide important habitat for resident and migratory wildlife species and are potentially subject to federal and state regulatory agency jurisdiction (i.e., Clean Water Act Sections 404 and 401, California Fish and Game Code Section 1600, Porter-Cologne Act). Furthermore, wetlands

and waters are critical features for wildlife in arid, desert landscapes and serve as climate refugia where the effects of changing climate conditions are less severe or ameliorated (CNRA 2014; NFWP 2012).

Joshua Tree Woodland

Joshua tree woodlands (*Yucca brevifolia*) are the iconic vegetation type of the Mojave Desert, and approximately 301 acres have been mapped in the Park. Unlawful harvest of this species and other native desert plants is prohibited under the California Desert Native Plants Act. Additionally, this community (and the species itself) is of increasing conservation interest due to observed range contractions resulting from increasing temperatures and altered precipitation seasonality arising from climate change (Barrows and Murphy-Mariscal 2012; Cole et al. 2011). The Park is near the western edge of the species range where the population has been modeled as unsustainable (Cole et al. 2011).

Other Sensitive Vegetation Communities

As described in Section 4.1, the Park supports 19 vegetation communities and land covers. Of these, five vegetation communities are considered sensitive and are listed in Table 3. Sensitive vegetation communities account for approximately 5% of the overall Park acreage. Vegetation communities are described in Section 4.1 and are depicted on Figure 7.

Table 3
Sensitive Vegetation Communities

General Vegetation Vegetation Alliance	Rarity Ranking*	Park Acreage
Desert Scrub		**875**
Krascheninnikovia lanata (winterfat scrub)	G4S3	573
Yucca brevifolia (Joshua tree woodland)	G4S3	301
Riparian		**537**
Ericameria paniculata (black-stem rabbitbrush scrub)	G4S3	82
Lepidospartum squamatum (scale broom scrub)	G3S3	452
Salix laevigata (red willow thickets)	G3S3	2
	Park Total	**1,411**

Notes: Vegetation communities and land cover based on the CDFW West Mojave Vegetation layer (AIS 2013; VegCAMP et al. 2013) with Park-specific mapping refinements based on 2018 and 2019 field reconnaissance.
* Rarity rankings from *California Natural Community* List (CDFW 2018b). Vegetation communities with state rarity ranking of S1–S3 are considered sensitive.

4.3.2 Special-Status Plant Species

The following is a discussion of special-status plant species that are known or have the potential to occur in RRCSP. A review of all potentially occurring special-status plant species in the vicinity of the Park is provided in Appendix D. Special-status plant species that have been recorded in and around RRCSP are shown in Figure 8, with more detailed mapping provided in the Biological Resources Mapbook in Appendix A. Table 4 provides an estimate of the potentially suitable habitat for the special-status plant species that occur or have the potential to occur in the Park based on known habitat associations.

Table 4
Special-Status Plant Species Potentially Suitable Habitat

Special-Status Plant Species Groupings	Species Name	Park Acreage
Species generally associated with Desert Scrub, Desert Wash, and Wetland Habitats	Alkali mariposa lily (*Calochortus striatus*) Spiny-hair blazing star (*Mentzelia tricuspis*) Wine-colored tufa moss (*Plagiobryoides vinosula*) Mojave indigo-bush (*Psorothamnus arborescens* var. *arborescens*)	22,451
Species generally associated with Desert Scrub Habitats	Red rock tarplant (*Deinandra arida*) Kern County evening-primrose (*Camissonia kernensis* ssp. *kernensis*) White pygmy-poppy (*Canbya candida*) Mojave spineflower (*Chorizanthe spinosa*) Death Valley sandmat (*Euphorbia vallis-mortae*) Solitary blazing star (*Mentzelia eremophila*) Creamy blazing star (*Mentzelia tridentata*)	21,777

Table 4
Special-Status Plant Species Potentially Suitable Habitat

Special-Status Plant Species Groupings	Species Name	Park Acreage
	Crowned muilla (*Muilla coronata*) Charlotte's phacelia (*Phacelia nashiana*) Mojave fish-hook cactus (*Sclerocactus polyancistrus*)	
Species generally associated with Desert Wash and Wetland Habitats	Red Rock Canyon monkeyflower (*Erythranthe rhodopetra*) Sierra Nevada monkeyflower (*Erythranthe sierrae*)	674
Species generally associated with Woodland Habitats	Inland gilia (*Gilia interior*)	301

Federal and State Listed Plant Species

No federally listed plant species are known to occur or potentially occur within the Park. Additionally, no state-listed endangered or threatened species occur or potentially occur in RRCSP; however, red rock tarplant, a state listed rare species, has been documented in the Park and is described below.

Red Rock Tarplant

Red rock tarplant (*Deinandra arida*) is a state listed rare species and a CRPR 1B.2 species. Red rock tarplant is an annual herb that occurs within Mojavean desert scrub on clay and volcanic tuff soils. This species is recorded in the CNDDB within the Park, as well as in the State Parks dataset, and was documented during fieldwork in 2018 and 2019. The tarplant was observed in several locations, but mainly in the south-central region of the Park (Figure 8).

Other Plant Species of Interest

The following provides a discussion of other plant species of interest that occur or potentially occur in the Park.

Alkali Mariposa Lily

Alkali mariposa lily (*Calochortus striatus*) is a CRPR 1B.2 species. This perennial bulbiferous herb occurs in chaparral, chenopod scrub, Mojavean desert scrub, and meadows and seeps on mesic alkaline soils (CNPS 2018a). Alkali mariposa lily has been recorded in the CNDDB within the Park along and west of SR-14 (Figure 8).

Red Rock Canyon State Park

Plant Points

Dudek (2018)

- Death Valley sandmat
- Red Rock Canyon monkeyflower
- Red Rock tarplant
- solitary blazing star

CNDDB (2018)

- Charlotte's phacelia
- Red Rock Canyon monkeyflower
- Red Rock poppy
- Red Rock tarplant
- alkali mariposa-lily
- creamy blazing star

State Parks (2019)

- Crowned muilla
- Red Rock poppy
- Mojave Fish-hook cactus
- Lemmon's jewelflower
- Red Rock Canyon monkeyflower
- Solitary blazing star

Plant Polygons

Dudek (2018)

- Red Rock Canyon monkeyflower
- Red Rock tarplant

State Park Datasets

- Charlotte's phacelia
- Mojave spineflower
- Cottontop cactus
- Mojave Fish-hook cactus
- Mojave spine flower
- Red Rock poppy
- Red Rock tarplant

SOURCE: Bing Maps 2018; California State Parks 2018; CDFW 2018

DUDEK

0 0.5 1 Miles

FIGURE 8

Plant Species

Red Rock Canyon State Park - Biological Resources Report

INTENTIONALLY LEFT BLANK

Kern County Evening-Primrose

Kern County evening-primrose (*Camissonia kernensis* ssp. *kernensis*) is a CRPR 4.3 species. This annual herb occurs within chaparral, Joshua tree woodland, pinyon and juniper woodland on sandy, gravelly, or granitic soils (CNPS 2018a). Kern County evening-primrose was recorded in creosote bush scrub in the northeastern portion of the Park along the eastern fork of Last Chance Canyon in 1960 (CCH 2018).

White Pygmy-Poppy

White pygmy-poppy (*Canbya candida*) is a CRPR 4.2 species. This annual herb occurs in Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland on gravelly, sandy, or granitic soils. There is a single historical occurrence of this species from the central area of the Park from 1932 (CCH 2018).

Lemmon's Jewelflower

Lemmon's jewelflower (*Caulanthus lemmonii*) is a CRPR 1B.2 species. This annual herb occurs in pinyon and juniper woodland and grasslands (CNPS 2019). Only a single plant of this species was observed in bloom right next to a wash along Last Chance Canyon in April 2019.

Mojave Spineflower

Mojave spineflower (*Chorizanthe spinosa*) is a CRPR 4.2 species. This annual herb occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and on playas. Soils where this species occurs are sometimes alkaline. This species has been recorded within the Park on either side of SR-14 and was observed in 2019 (Figure 8).

Red Rock Canyon Monkeyflower

Red Rock Canyon monkeyflower (*Erythranthe rhodopetra*) is a CRPR 1B.1 species that occurs in Mojavean desert scrub and canyon washes in sandy soils. This species is recorded in the CNDDB within the Park and was observed during fieldwork in 2018 and during surveys conducted in portions of the Park in 2017 (Fraga 2018). The species has been reported along and in the wash just west of SR-14, near Cudahy Camp, near Red Rooster rock formation, near Hagen Canyon, near Red Buttes, and in Last Chance Canyon. Several occurrences of Red Rock Canyon monkeyflower were observed in 2019 along the canyon northwest of the El Paso Mountains from north SR-14 to near Cudahy Camp (Figure 8).

Sierra Nevada Monkeyflower

Sierra Nevada monkeyflower (*Erythranthe sierrae*) is a CRPR 4.2 species that occurs in openings in cismontane woodland and lower montane coniferous forest, as well as dry meadows and seeps, vernally wet depressions, swales, and along streambanks. The plant can typically be found in substrates that are usually granitic and sandy. This species was previously documented along Tarweed Creek in the Park in 1969. Records indicate the monkeyflower was common in moist subalkaline sand in creosote bush scrub along the small creek (CCH 2018).

Red Rock Poppy

Red rock poppy (*Eschscholzia minutiflora* ssp. *twisselmannii*) is a CRPR 1B.2 species that occurs in Mojavean desert scrub on volcanic tuff substrates. This annual herb has been recorded in the CNDDB within the Park and is included in the Park dataset, including from 2019 fieldwork. The species occurs at the base of the El Paso Mountains, near and northeast of Cudahy Camp, along Last Chance Canyon, and between Last Chance Canyon and SR-14, and on either side of SR-14 in the western portion of the Park (Figure 8).

Death Valley Sandmat

Death Valley sandmat (*Euphorbia vallis-mortae*) is a CRPR 4.2 species that occurs in Mojavean desert scrub in sandy or gravelly soils. This perennial herb has been recorded in four locations west of SR-14 within the Park (CCH 2018) and was documented in similar locations during fieldwork in 2018 (Figure 8).

Inland Gilia

Inland gilia (*Gilia interior*) is a CRPR 4.3 species that occurs in rocky cismontane woodland, Joshua tree woodland, and lower montane coniferous forest. This annual herb has not been recorded in the Park, but has a moderate potential to occur. There is suitable Joshua tree woodland habitat and the nearest record is approximately 5 miles north of the Park. There are several records north and northwest of the Park (CCH 2018).

Solitary Blazing Star

Solitary blazing star (*Mentzelia eremophila*) is CRPR 4.2 species that occurs in Mojavean desert scrub. This annual herb has been recorded in several locations within the Park, primarily along SR-14 and the road west of SR-14 and in Scenic Canyon (CCH 2018) and was also documented in similar locations during fieldwork in 2018. In 2019, this species was observed along and west of Last Chance Canyon (Figure 8).

Spiny-Hair Blazing Star

Spiny-hair blazing star (*Mentzelia tricuspis*) is CRPR 2B.1 species that occurs in Mojavean desert scrub on slopes or in washes with sandy or gravelly substrates. This species has been recorded 2 miles north of Red Rock Canyon along SR-14 at the edge of the Park (CCH 2018).

Creamy Blazing Star

Creamy blazing star (*Mentzelia tridentata*) is a CRPR 1B.3 species that occurs in Mojavean desert scrub in rocky, gravelly, and sandy soils (CNPS 2018a). This annual herb has been recorded in the CNDDB at one location within the Park, west of SR-14 and north of Park Headquarters (Figure 8).

Crowned Muilla

Crowned muilla (*Muilla coronata*) is a CRPR 4.2 species that occurs in chenopod scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland (CNPS 2018a). Two records of this perennial bulbiferous herb occur west of SR-14 within the Park (Calflora 2018). Crowned muilla was also observed east of SR-14 and north of the El Paso Mountains in 2019. There is also a historical sighting of this species from 1932, just east of the Park (CCH 2018).

Charlotte's Phacelia

Charlotte's phacelia (*Phacelia nashiana*) is a CRPR 1B.2 species that occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland in soils that are usually granitic and sandy (CNPS 2018a). This annual herb is included in the CNDDB within the Park and in the Park dataset in several locations, including Last Chance Canyon and the El Paso Mountains. A long stretch of Charlotte's phacelia was mapped along Last Chance Canyon in 2019 (Figure 8).

Wine-Colored Tufa Moss

Wine-colored tufa moss (*Plagiobryoides vinosula*) is a CRPR 4.2 species that occurs in cismontane woodland, Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, and riparian woodland. Substrates that support this species are typically granitic and sometimes clay, with occurrences generally documented along seeps and streams. This moss has a moderate potential to occur, but has not been recorded in the Park. There is suitable desert scrub habitat, as well as seeps and streams within the Park. The Park falls within the species' range, with a record from the Cinco quadrangle just west of RRCSP (CNPS 2018).

Mojave Indigo-Bush

Mojave indigo-bush (*Psorothamnus arborescens* var. *arborescens*) is CRPR 4.3 perennial deciduous shrub that occurs in Mojavean desert scrub and riparian scrub. A historical record of this variety occurs along SR-14 within RRCSP, but no CNPS records are known in the vicinity of the Park (Calflora 2018; CCH 2018; CNPS 2018a).

Mojave Fish-Hook Cactus

Mojave fish-hook cactus (*Sclerocactus polyancistrus*) is a CRPR 4.2 species that occurs in Great Basin scrub, Joshua tree woodland, and Mojavean desert scrub, generally on carbonate substrates. Mojave fish-hook cactus has been recorded within the Park dataset in the southern portion of RRCSP and was observed in that area in 2019 (Figure 8).

4.3.3 Special-Status Wildlife Species

The following is a discussion of special-status wildlife species that are known or have the potential to occur in RRCSP. A review of all potentially occurring special-status wildlife species in the vicinity of the Park is provided in Appendix E. Special-status wildlife species that have been recorded in and around RRCSP are shown in Figure 9, with more detailed mapping provided in the Biological Resources Mapbook in Appendix A. Table 5 provides an estimate of the potentially suitable habitat for the special-status wildlife species that occur or have the potential to occur in the Park based on known habitat associations.

Federal and State Listed Wildlife Species

The following provides a discussion of federally and state listed wildlife species that occur or potentially occur within the Park.

Table 5
Special-Status Wildlife Species Potentially Suitable Habitat

Special-Status Wildlife Species Groupings	Species Name	Park Acreage
Species generally associated with Desert Scrub, Desert Washes, and Desert Outcrops and Badlands	Desert tortoise (*Gopherus agassizii*) Golden eagle (*Aquila chrysaetos*) and other raptors (foraging habitat) American badger (*Taxidea taxus*) Desert kit fox (*Vulpes macrotis arsipus*)	25,270
Species generally associated with Desert Scrub and Desert Washes	Mohave ground squirrel (*Xerospermophilus mohavensis*) loggerhead shrike (*Lanius ludovicianus*) Bendire's thrasher (*Toxostoma bendirei*) Crissal thrasher (*Toxostoma crissale*) LeConte's thrasher (*Toxostoma lecontei*) Brewer's sparrow (*Spizella breweri*) Tulare grasshopper mouse (*Onychomys torridus tularensis*) Yellow-eared pocket mouse (*Perognathus parvus xanthonotus*)	22,450
Species generally associated with Desert Outcrop and Badlands	Golden eagle and other raptors (nesting habitat) Bat species (roosting habitat)	2,821
Species associated with Riparian Woodlands	Willow flycatcher (*Empidonax traillii*)	2
Species associated with Wetlands	Tricolored blackbird (*Agelaius tricolor*)	2

Desert Tortoise

The Mojave population of desert tortoise occurs north and west of the Colorado River in California, Arizona, Nevada, and Utah and is federally and state listed as threatened. Federal critical habitat was designated for the desert tortoise in 1994, and a Recovery Plan for the species was issued in 2011 (59 FR 5820–5866; USFWS 2011). RRCSP is near the western edge of the species' range, which is bounded in the west Mojave Desert by the Tehachapi and Sierra Nevada mountain ranges. USFWS critical habitat for desert tortoise is designated just 3 miles east of the Park, and the BLM Desert Tortoise Research Natural Area is located just south of Koehn Lake approximately 4 miles from RRCSP. Nearly the entire Park, with the exception of the El Paso Mountain Range, is modeled as suitable for desert tortoise, based on the USGS species distribution model (Nussear et al. 2009).

Available database occurrences for the desert tortoise are shown in Figure 9 (magenta symbols). Desert tortoise was most recently reported in CNDDB and BLM datasets in RRCSP in 2007.

Occurrence points for desert tortoise provide an indication of the spatial distribution and suitability of the Park to support the species, rather than any indication of number or density of tortoise in RRCSP. In 2002 through 2004, the USGS surveyed the western portion of the Park for desert tortoise using demographic and landscape plots. This study estimated that population densities

were less than 5 individuals per kilometer (2.7 to 3.6/square kilometers), and the total RRCSP desert tortoise population was estimated at approximately 108 individuals (Berry et al. 2008). This study also found evidence of tortoise population decline in the Park, similar to findings in the adjacent Fremont Valley.

Desert tortoise surveys were conducted by CDFW/DPR in Nightmare Gulch and Last Chance Canyon in 2013 and 2014. Although no live tortoises were detected, desert tortoise sign was observed at 11 locations in the Nightmare Gulch study area primarily in the desert scrub areas above the canyon bottom. No desert tortoise sign, however, was detected in Last Chance Canyon during these surveys (CDFW 2014). During the 2018 field reconnaissance in upper Nightmare Gulch, Dudek biologists discovered a tortoise carapace wedged under a low rock overhang, but, no further information could be gathered regarding this observation without damaging the shell or rock. CDFW/DPR biologists noted that the canyon bottoms of Nightmare Gulch and Last Chance Canyon provide little to no habitat for desert tortoise due to the bare soil and rock conditions, which support little forage (CDFW 2014). Based on all available information, as summarized above, all areas of the Park would generally be considered suitable for desert tortoise except for areas of steep rock outcrops, cliff faces, and rocky canyon bottoms, where habitat is limited or inaccessible to the species.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a resident songbird largely endemic to California. The species is in a marked decline throughout much of its range, and in 2018, the California Fish and Game Commission determined that listing the species as threatened in California was warranted (currently designated as a State Candidate species). The tricolored blackbird nests in large breeding colonies, typically characterized by freshwater wetlands composed of cattail (*Typha* spp.), bulrush (*Schoenoplectus* spp.), blackberry (*Rubus armeniacus*), and/or willows (*Salix* spp.), and forages in adjacent fields (Beedy and Hamilton 1999). This species is also noted frequently moving to different breeding sites each season.

No records of tricolored blackbird occur in the Park. Very little breeding habitat is known within RRCSP, and foraging opportunities for a breeding colony are limited. A tricolored blackbird breeding colony and occurrence records occur less than 2 miles southwest of the Park at Koehn Lake. Due to the proximity of this breeding colony location to the Park, this species has the potential to occur near and/or migrate through RRCSP.

Red Rock Canyon State Park

BLM (2012)

- golden eagle nests

CNDDB (2018)

- American badger
- Crissal thrasher
- Le Conte's thrasher
- Mohave ground squirrel
- Mojave/Agazziz"s Desert Tortoise
- Townsend's big-eared bat
- Tulare grasshopper mouse
- burrowing owl
- golden eagle
- loggerhead shrike
- long-eared owl
- mountain plover
- pallid bat
- prairie falcon
- spotted bat

DRECP (2016)

- Ebird Species
- Mohave ground squirrel
- Townsend's big-eared bat
- Virginia's warbler
- golden eagle
- loggerhead shrike

Dudek (2018)

- Bats
- Bewick's Wren
- Black-throated Sparrow
- Desert Horned Lizard
- Desert Iguana
- Great-horned Owl
- Greater Roadrunner
- Mojave/Agazziz"s Desert Tortoise
- Nelson's antelope squirrel
- Rock Wren
- Sage Thrasher
- Willow Flycatcher
- loggerhead shrike
- phainopepla
- white-tailed antelope squirrel
- yellow-backed spiny lizard
- zebra-tailed lizard

State Park Datasets

- American badger
- Bats
- Mohave ground squirrel
- Mojave/Agazziz"s Desert Tortoise
- Raptor
- Tulare grasshopper
- tricolored blackbird

SOURCE: Bing Maps 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.5 1 Miles

FIGURE 9

Wildlife Species

Red Rock Canyon State Park - Biological Resources Report

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Willow Flycatcher

Three willow flycatcher (*Empidonax traillii*) occur in California: the southwestern willow flycatcher (*E. t. extimus*), little willow flycatcher (*E. t. brewsteri*), and Great Basin willow flycatcher (*E. t. adastus*). All subspecies look very similar and can only be differentiated by slight differences in plumage, morphology, song, and breeding time/location (Unitt 1987; Sogge et al. 2010). The southwestern willow flycatcher is federally listed as endangered and willow flycatcher (regardless of subspecies) is state-listed as endangered in California. Willow flycatchers are small, insect-eating, Neotropical migratory birds that breed in the United States and Canada and winter in southern Mexico, Central America, and northern South America (Sogge et al. 2010; USFWS 2014). Due to variability in geography, elevation, weather, and other factors, the little and Great Basin willow flycatcher subspecies migrate through areas of nesting southwestern subspecies early (northbound migrants) and late (southbound migrants) in the southwestern breeding season. Due to their similarities in appearance and song, willow flycatchers observed within the southwestern willow flycatcher range can be assumed to be southwestern only during the period of approximately June 15 through July 20 (USFWS 2002).

RRCSP is situated at the boundary between the breeding ranges for southwestern willow flycatcher and little willow flycatcher. The breeding range of the little willow flycatcher extends from the Tehachapi and southern Sierra Nevada mountains north through California and the Pacific Northwest, whereas the southwestern willow flycatcher breeding range includes southern California and the arid southwest (Sogge et al. 2010). The southwestern willow flycatcher has not been reported in or near the vicinity of RRCSP. The area nearest to the Park known to support southwestern willow flycatcher is at Lake Isabella approximately 22 miles northwest of RRCSP.

During the 2018 field reconnaissance, Dudek biologists detected willow flycatcher at one location in the Park: the riparian habitat in Last Chance Canyon near Cudahy Camp (see Figure 9). This observation was made on May 8; therefore, the subspecies of willow flycatcher was not determined. Other database records for willow flycatcher (undetermined subspecies) occur outside the Park, including at Koehn Lake and in Butterbredt Canyon. Based on all available information as summarized above, willow flycatcher likely uses the Park for foraging and stopovers during annual northward and southward migration. However, nesting habitat for willow flycatchers is limited and likely would only occur in the riparian habitat at Cudahy Camp.

Mohave Ground Squirrel

The Mohave ground squirrel (*Xerospermophilus mohavensis*) is a state threatened species that occurs entirely within the western Mojave Desert of California. The range of this species extends from the Antelope and Victor valleys in the south, through the entire west Mojave Desert, including Edwards Air Force Base, western San Bernardino County, the California City area, and

north into the Owens and Searles valleys (Leitner 2013; 2008). Nearly the entire Park is modeled as suitable for Mohave ground squirrel, based on the USGS species distribution model (Inman et al. 2013). Additionally, as noted above in Section 1.3, BLM has designated the Mohave Ground Squirrel ACEC over the Park and surrounding lands. Further, extensive trapping and camera studies for the species have been conducted in the region over the past couple decades to support planning efforts in the West Mojave, which CDFW synthesized into designated Mojave Ground Squirrel "Important Areas." Important areas include key population centers, habitat linkages between population centers, expansion areas around key population centers, and a climate change extension (CEC et al. 2014). The northern portion of the Park is part of the Little Dixie Wash key population center, and the remainder of the Park outside the El Paso Mountains is considered part of the species' population expansion area.

Numerous focused surveys for Mohave ground squirrel have occurred in recent times both within and around the Park. Trapping surveys for Mohave ground squirrel at RRCSP were conducted by Leitner in 2007, 2008, and 2010 (Leitner 2009, 2010). Surveys in 2007 detected the species at four locations in the northwestern portion of the Park, and surveys in 2008 confirmed that these areas could support the species (Leitner 2009). Surveys in 2010 again detected Mohave ground squirrel in the northwestern sections of the Park; however, the species was not detected in the southwestern portions of RRCSP west of SR-14 (Leitner 2010). Mohave ground squirrel camera trapping surveys were conducted by CDFW/DPR in Nightmare Gulch and Last Chance Canyon in 2013 and 2014. No Mohave ground squirrels were detected in either canyon during these surveys, and these canyon bottoms were determined to provide little to no habitat for this fossorial species due to limited soil development and rocky substrates (CDFW 2014).

In 2015, Leitner and Delany (2015) conducted camera study surveys west of the Park in and around the Desert Tortoise Research Natural Area. In addition, trapping and camera surveys for Mohave ground squirrel and other small mammals were conducted in 2012 on the adjacent Eastern Kern County Acquisition lands acquired by State Parks (Biosearch Associates 2012). The species has been documented in areas around RRCSP to the west, north, and east (Leitner and Delany 2015; Leitner 2013; Biosearch Associates 2012). Available database occurrence records for Mohave ground squirrel are shown on Figure 9 (orange symbols). Occurrence points for this species provide an indication of the spatial distribution and suitability of the Park to support Mohave ground squirrel, rather than any indication of species' number or density within RRCSP.

Based on all available information as summarized above, all areas of the Park would generally be considered suitable for Mohave ground squirrel except for areas of steep rock outcrops, cliff faces, and rocky canyon bottoms where habitat is limited or inaccessible to the species.

Other Wildlife Species of Interest

The following provides a discussion of other wildlife species of interest that occur or potentially occur in the Park.

Golden Eagle

Golden eagle (*Aquila chrysaetos*) is a fully protected species in California and a BLM Sensitive species protected under the Bald and Golden Eagle Protection Act and California Fish and Game Code. Golden eagles occur throughout western North America and are primarily a year-round resident in California. The species uses essentially all terrestrial habitats with preferred nesting areas in the desert region consisting of cliffs, rock outcrops, and ledges of mountain ranges. Golden eagles are extremely wide-ranging, with average home range size in Southern California being estimated at 36 square miles (Dixon 1937) and foraging home ranges in the western U.S. being estimated at 8.5 to 12.7 square miles during the breeding season (Kochert et al. 2002). More recently, Braham et al. (2015) found that eight telemetered golden eagles in the Mojave Desert had an average home range size of 118.8 square miles, but that spatial use varied widely (range from 1.7 to 1,369.6 square miles) depending on time of year, elevation and terrain, breeding status, and age.

In their resource management planning efforts in the California Desert, BLM identified the El Paso Mountain Range as one of the "key raptor areas" for golden eagle and other raptor species in the Mojave Desert (CEC et al. 2014). Based on a review of the cumulative BLM golden eagle nest dataset, CNDDB, and DPR datasets, RRCSP and the surrounding lands are important areas for golden eagle nesting and foraging. Golden eagle has been recorded at four locations in the Park (see yellow symbols on Figure 9): the peaks above Nightmare Gulch (two locations), the cliffs of Hagen Canyon, and the cliffs of Ricardo Campground. Additionally, golden eagle activity may also occur in the area referred to as Red Bluffs, east of Cudahy Camp (see generic "raptor" points on Figure 9 in the eastern portion of the Park). Surrounding the Park, golden eagle occurrences/nest locations are concentrated in three locations: approximately 4 miles southwest of the Park in Jawbone Canyon, approximately 4 miles west of the Park in Dove Springs Canyon, and approximately 5 miles east of the Park in the El Paso Mountains above Garlock.

Based on all available information as summarized above, all areas of the Park would generally be considered foraging habitat for golden eagle. Additionally, RRCSP and surrounding areas, particularly areas of steep rock outcrops and cliff faces, support and have historically supported nesting golden eagles and serve as excellent nesting habitat.

Other Raptors

The Park is known to provide nesting and foraging habitat for a suite of owls, hawks, and falcons. In addition to golden eagle (see discussion above), other raptor species of interest that occur or have the potential to occur in RRCSP include long-eared owl (*Asio otus*), burrowing owl (*Athene cunicularia*), and prairie falcon (*Falco mexicanus*). The long-eared owl is a California species of special concern whose range stretches throughout nearly all of North America, except the extreme northern regions and tropical coastal regions. In the west, this species prefers shrubby habitat adjacent to open space. Interestingly, the birds do not build their own nests, but tend to use abandoned stick nests built by corvids or hawks, and will occasionally even share nesting areas with crows (Cornell Lab of Ornithology 2018). In the past, multiple occurrences (i.e., CNDDB, eBird) of long-eared owl have been documented in the Park. Prairie falcons are a USFWS bird of conservation concern that are indiscriminate residents of grasslands, shrublands, and open areas with suitable cliffs or ledges for nesting (Cornell Lab of Ornithology 2018). According to existing databases (i.e., CNDDB, eBird), many observations of prairie falcon have been recorded within RRCSP. Lastly, the burrowing owls is a California species of special concern and a USFWS bird of conservation concern found throughout nearly all of the southern portion of western North America, most frequently in arid, open landscapes with sparse or low vegetation. This species typically does not dig or burrow as the birds rely on rodents and other fossorial animals such as badgers, skunks, and tortoises to create their burrows for them (Cornell Lab of Ornithology 2018). With regard to the burrowing owl, multiple records (i.e., CNDDB, eBird) of the species have been noted in the vicinity of the Park.

The Park is also known to support more common raptor species like great horned owl (*Bubo virginianus*), barn owl (*Tyto alba*), merlin (*Falco columbarius*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). Further, evidence of raptor nesting activity (i.e., stick nests, white wash) is primarily concentrated in four areas of the Park: Nightmare Gulch, Hagen Canyon, Ricardo Campground, and Red Bluffs east of Cudahy Camp (see "raptor" points on Figure 9).

Desert Scrub Birds

A variety of desert scrub bird species of interest that occur or have the potential to occur in the Park, including loggerhead shrike (*Lanius ludovicianus*), Bendire's thrasher (*Toxostoma bendirei*), Crissal thrasher (*Toxostoma crissale*), LeConte's thrasher (*Toxostoma lecontei*), and Brewer's sparrow (*Spizella breweri*). See Figure 9 for occurrence locations for each species.

Loggerhead shrike is a California species of special concern and a USFWS bird of conservation concern that may be common in localized areas, but is in population decline. As a predatory species that hunts other birds, reptiles, small mammals, and insects, shrikes prefer open habitats in which

to hunt and nest including shrubland, deserts, and other landscapes with low-growing plants (Cade and Woods 1997). Several Loggerhead shrikes were identified during the 2018 surveys within the Park. Based on all available information, Loggerhead shrikes are likely present in the Park year-round (Yosef 1996).

Three thrasher species are also potentially present within and around RRCSP: Bendire's, Crissal, and LeConte's. Bendire's thrasher is a California species of special concern and a USFWS bird of conservation concern. Database records show that this species has been detected in the Butterbredt Spring area, approximately 5 miles west of the Park, and may use RRCSP for nesting or foraging. Crissal thrasher is a California species of special concern. The CNDDB records indicate that this species was identified within the Park in 1978; however, the nearest documented occurrence is 145 miles east in Mojave National Preserve. LeConte's thrasher is a California species of special concern and USFWS bird of conservation concern. Database records show that this species has been detected in and around the Park. Based on all available information, LeConte's thrasher likely uses RRCSP year-round for nesting, breeding, and foraging.

Brewer's sparrow is a USFWS bird of conservation concern. The species primarily uses scrub habitats and prefers landscapes dominated by big sagebrush (*Artemisia tridentata*), creosote (*Larrea tridentata*), and saltbush (*Atriplex* spp.) (Rottenberry 1999). During the fall southward migration, the Brewer's sparrow usually reaches the Mojave desert by September (Small 1994) and database records show that the species has been documented in and around the Park.

Migratory Birds

The Pacific Flyway is one of the primary migratory bird routes in the western hemisphere. Millions of birds each year travel along this route that stretches from the Bering Strait to the southern tip of South America. The Mojave Desert and RRCSP lies within the portion of the pathway known as the "interior" Pacific Flyway. Due to the Park's geographic location and unique habitats such as riparian areas and Joshua tree woodland, many migratory birds use the Park as a place to breed, rest, and feed during their journeys to and from their wintering and breeding grounds.

The availability of surface water features provide important stopover resources for migratory birds. Seeps and springs and riparian habitat in the Park, as well as the nearby Koehn Lake, can serve as attractants for migratory birds. Least Bell's vireo (*Vireo bellii pusillus*), mountain plover (*Charadrius montanus)*, western snowy plover (*Charadrius nivosus nivosus*), yellow warbler (*Setophaga petechial*), and yellow-breasted chat (*Icteria virens*) are just a few of the vast array of migratory bird species that may use the Park or adjacent features.

Bat Species

RRCSP is known to provide roosting and foraging habitat for a variety of bat species of interest including the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), and western mastiff bat (*Eumops perotis californicus*). The abundance of caves, steep cliffs, and rock outcrops in the Park and the potential water sources in and around RRCSP provide roosting and foraging habitat for these and other species of bats.

Small Mammals

The Tulare grasshopper mouse (*Onychomys torridus tularensis*) is a California species of special concern. According to CNDDB records, a female specimen was identified in the park in 1970; however, as with many small mammals, there is limited research available, and current range and population data is not fully understood. Compared to similar rodents, this species is believed to have larger home ranges and lower overall population densities (McCarty 1975; Tremor et al. 2017). Tulare grasshopper mice prefer arid, grassland and shrub habitats. Their diet consists of various invertebrates, and the species can be preyed upon by a suite of larger animals within the Park (Collins 1998).

Yellow-eared pocket mouse (*Perognathus parvus xanthonotus*) is a BLM sensitive species. The species is known to inhabit the eastern slopes of the Piute Mountains, as well as the extreme western edge of the Mojave Desert, but overall has a relatively small range and its population status is not fully understood. This pocket mouse is especially sensitive to habitat disturbances, and research has shown that OHV activity may be a potential threat as it damages vegetation communities and degrades pristine habitat (Laabs 2005). The species has been documented in a variety of habitats including desert scrub, sagebrush, and Joshua tree woodland habitat, all of which can be found within RRCSP (Laabs 2005).

Other Furbearers

The American badger (*Taxidea taxus*) is a California species of special concern that has been previously recorded in the Park. Their diet consists of small rodents, insects, lizards, and occasionally birds. Badgers prefer habitats with ample open space and very little cover, such as grasslands and deserts. The desert kit fox (*Vulpes macrotis arsipus*) is a mammal species of increasing conservation interest that has the potential to occur within and around RRCSP. In California, their range extends throughout nearly the entire southeast, including both the Mojave and Sonoran deserts. Desert bighorn sheep (*Ovis canadensis nelsoni*), one of several subspecies of bighorn sheep, is a BLM sensitive species and a state fully protected species that inhabits extremely arid, rocky habitats characterized by sheer cliffs, canyons, and washes. Desert bighorn sheep are

not expected to inhabit or use the Park. According to CNDDB, the closest species record is about 35 miles east of RRCSP in the West Granite Mountains.

4.4 Wildlife Corridors and Habitat Linkages

Terrestrial wildlife species typically occupy habitat patches most favorable to each species within a landscape matrix, and they may move between favorable habitat patches through less favorable habitats (Rosenberg et al. 1997). These wildlife movement areas between larger habitat patches are generally referred to as habitat linkages or movement corridors. Movement ecology is particularly species- and scale-specific and often include short-term individual movements, such as foraging within an organism's home range; long-term dispersal or one-time emigration and immigration events between disparate populations; and seasonal or periodic migration. Corridors and habitat linkages can allow for long- or short-term movements, dispersal, and migration depending on the life history requirements and ability of a particular species to travel through a landscape. Locations that serve as corridors or habitat linkages for some species may serve as core habitat for other species. Habitat linkages also allow for range shifts of natural communities and plant and animal species in response to changing climate conditions.

RRCSP is situated at the boundary between two major ecoregions and supports varied terrain and topographies that indicate the Park plays an important role in regional landscape connectivity and wildlife movement. The Park is located at the western edge of the Mojave Desert ecoregion near the boundary with the Sierra Nevada ecoregion (see Figure 4), and this unique location suggests that RRCSP may be used by terrestrial wildlife for up- or downslope seasonal movements or range shifts between desert and forest ecosystems. The southwest-to-northeast oriented El Paso Mountain Range bisects the Park, and the ridgelines and slopes of these mountains (see Figure 5) provide for local terrestrial wildlife movement within the Park and a habitat linkage to adjacent lands to the northeast, including the BLM El Paso Mountains Wilderness Area. The mountain canyons provide for movement and dispersal between upper and lower elevations and connectivity to the broad, surrounding alluvial plains.

The Park is considered relatively permeable to wildlife movement, as it is predominately unfragemented habitat and connected to adjacent areas. Wildlife movement is generally unconstrained by land uses, with the exception of SR-14, other roadways, fences, and other structures that can limit or restrict movement for some species. The steep cliffs and escarpments likely limit wildlife movement pathways in some areas of the Park, particularly for smaller or less mobile species. Resident birds, as well as migratory birds using the Pacific Flyway movement corridor, move relatively unimpeded through the Park and its surroundings.

Habitat linkages and corridors are modeled through least cost pathway and landscape permeability analyses. Least cost pathway analyses identify corridors between habitat cores that would require

the least effort (cost) for a traveling individual. Landscape permeability analyses incorporate physical landforms to analyze regional permeability. As shown on Figure 10, three habitat connectivity modeling studies identify the Park as providing important regional habitat linkage functions: the California Essential Habitat Connectivity project (Spencer et al. 2010), the California Desert Connectivity project (also referred to as the Desert Linkage Network) (Penrod et al. 2012), and the West Mojave Connectivity Mapping project (CBI 2017). Based on these studies, RRCSP contributes to providing the following important habitat connectivity:

- **El Paso Mountains and Fremont Valley to Southern Sierra Nevada Mountains:** The Park provides a habitat linkage between the Fremont Valley southeast of the Park through the El Paso Mountains and into the southern Sierra Nevada Mountains (Spencer et al. 2010; Penrod et al. 2012). Penrod et al. (2012) model specific corridors along the El Paso Mountains and in the western portion of RRCSP along Dove Springs Canyon and Butterbredt Canyon.

- **West Mojave transition to Tehachapi Mountains:** The Park is part of a broad habitat linkage along the southwest-to-northeast oriented Tehachapi Mountain Range, which is a transition zone along the edge of the Mojave Desert (Spencer et al. 2010).

- **Fremont Valley to Indian Wells Valley:** RRCSP links the desert floor of the Fremont Valley southeast of the Park to the Indian Wells Valley north of the Park through a broad corridor along the entire western portion of RRCSP (CBI 2017).

As these studies show, RRCSP is a regionally important area for habitat connectivity and wildlife movement. At a local scale, wildlife movement is influenced by landscape features, and the movement and dispersal capabilities of individual species. Landscape features like washes, canyons, riparian habitat, and ridgelines are landforms often used by species for movement and would be considered important for the maintenance of habitat connectivity in the region.

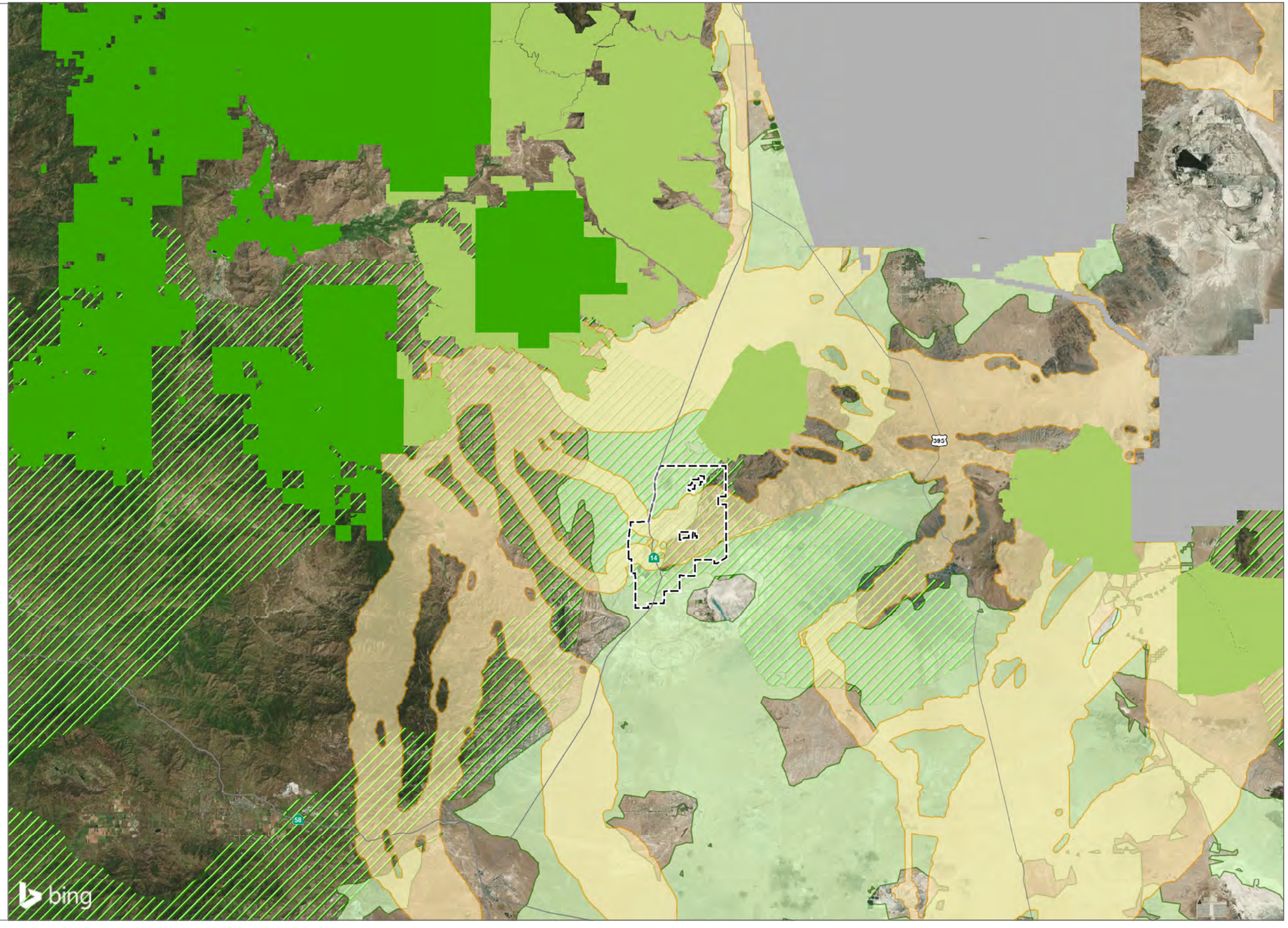
Red Rock Canyon State Park

Core Habitat Blocks

- National Forests
- BLM Wilderness
- Military Lands

Modeled Habitat Linkages

- Desert Linkage Network
- CBI West Mojave Connectivity
- California Essential Habitat Connectivity Corridors



SOURCE: Bing Maps 2018; South Coast Wildlands 2018; CDFW 2018; CBI 2018; BLM 2018

DUDEK

0 3 6 Miles

FIGURE 10

Habitat Linkages

Red Rock Canyon State Park - Biological Resources Report

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5 MANAGEMENT CONSIDERATIONS

Situated at the western edge of the Mojave Desert in a transition zone to the southern Sierra Nevada Mountains, RRCSP is a biologically diverse Park unit supporting unique and rich assemblages of plant and wildlife species and vegetation communities. Management of RRCSP must take into consideration a myriad resource values and Park uses, including biological resources. Table 4 synthesizes the biological information provided in this report to highlight the key biological functions and management considerations for RRCSP.

Table 6
Biological Management Considerations

General Habitats	Key Biological Functions	Management Considerations
Desert Scrubs	• Desert tortoise habitat and western edge of species range • Mohave ground squirrel key population center and population expansion area • Resident scrub bird nesting and foraging • Raptor foraging • Migratory bird movement, stop over, and foraging • Joshua tree woodlands • Habitat connectivity • Hydrologic connectivity	• Continue to protect and maintain the biological functions of desert scrub habitats within the Park. • Continue to implement route management activities to maintain access and appropriate use within the Park, including designating open and closed routes, fencing and signage, route maintenance, patrolling, enforcement, and agency and user group partnerships. • Implement periodic species population monitoring activities in the Park, using structured and repeatable methods that contribute to regional monitoring by state/federal agencies in the Mojave Desert, to detect trends in distribution, occupancy, or abundance of key species such as desert tortoise, Mohave ground squirrel, scrub birds, and Joshua tree.
Riparian and Wetland and Other Waters	• Riparian bird nesting, stop over, and foraging • Bat foraging • Migratory bird movement, stop over, and foraging • Wildlife movement • Surface water source • Climate refugia	• Continue to protect and maintain the biological functions of riparian and wetland habitats within the Park. • Continue to implement route management activities to maintain access and appropriate vehicle use within the Park. • Implement access restrictions as necessary to protect riparian and wetland areas, seeps/springs, or areas of surface water, particularly those areas supporting willow, mesquite, rushes, and cattails. • Implement periodic qualitative assessments of the willow riparian habitat at Cudahy Camp and rush marsh stands along SR-14 to track persistence and function.
Cliffs, Outcrops, and Canyons	• Nesting for raptors, including golden eagles, hawks, falcons, owls • Bat roosting • Wildlife movement • Climate refugia	• Continue to protect and maintain the biological functions of cliff, outcrop, and canyon habitats within the Park. • Continue to implement route management activities to maintain access and appropriate vehicle use within the Park. • Implement seasonal access restrictions in areas of active nesting for golden eagle and other raptors, including but not limited to Nightmare Gulch and Red Bluffs, to avoid disrupting nesting during the season from February through June, unless nest monitoring documents the absence or completion of nesting during that season.

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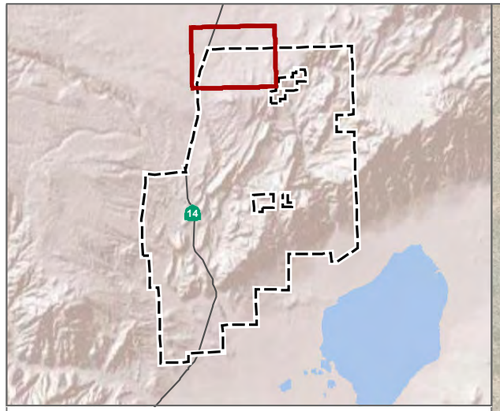
APPENDIX A

Biological Resources Mapbook



Red Rock Canyon State Park

Wildlife

CNDDB (2018)

- Mohave ground squirrel
- Mojave/Agazziz"s Desert Tortoise
- prairie falcon

DRECP (2016)

- Mohave ground squirrel

Dudek (2018)

- Bats
- Desert Horned Lizard
- Nelson's antelope squirrel
- loggerhead shrike
- white-tailed antelope squirrel

State Park Datasets

- Mojave/Agazziz"s Desert Tortoise

Vegetation Communities

Desert Scrub

- Coleogyne ramosissima
- Grayia spinosa
- Krascheninnikovia lanata
- Larrea tridentata
- Larrea tridentata - Ambrosia dumosa
- Yucca brevifolia

Other Land Cover

- Urban

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

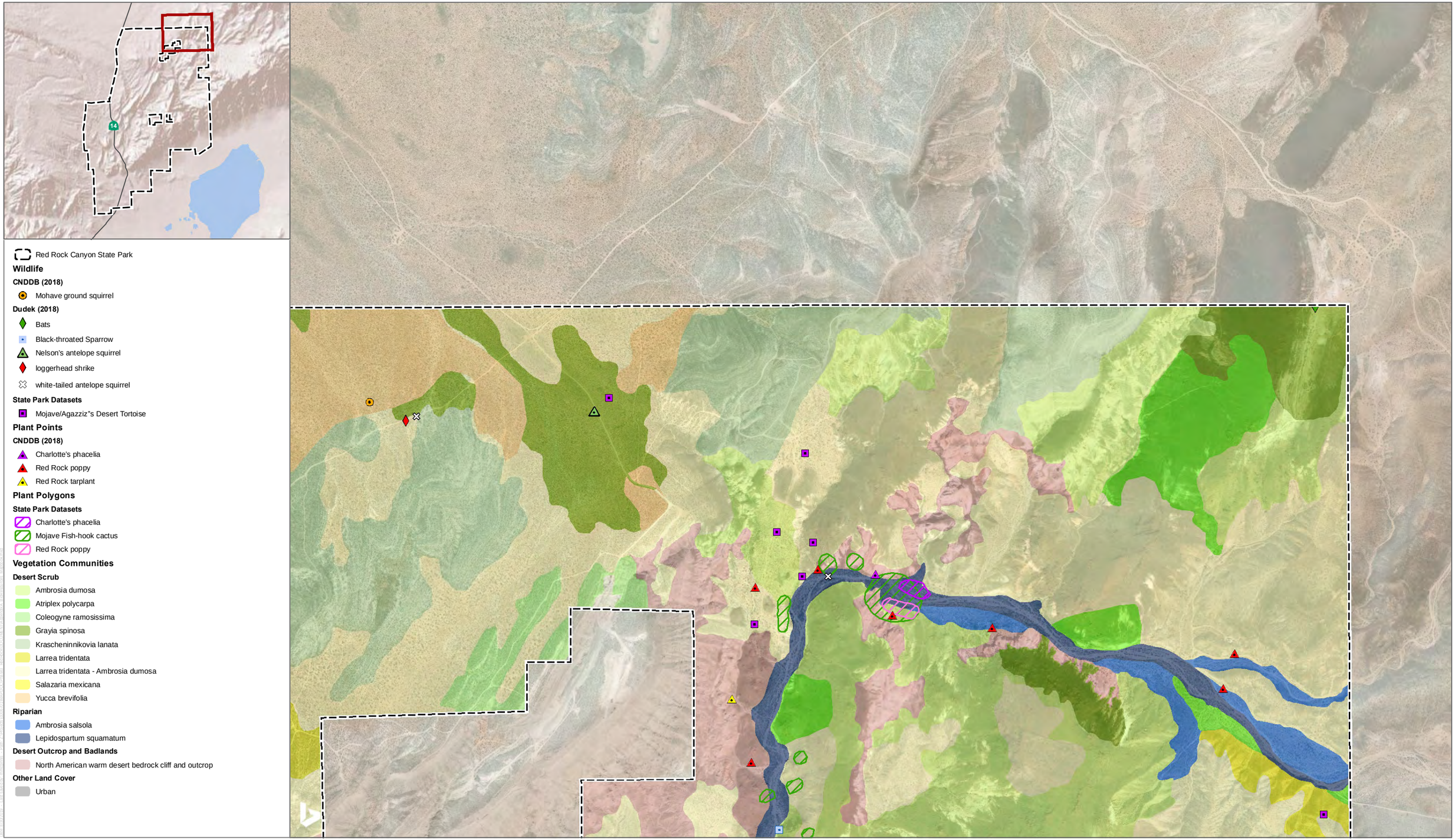
DUDEK

0 0.075 0.15 Miles

Appendix A - 1

Biological Resources

Red Rock Canyon State Park - Biological Resources Report



SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

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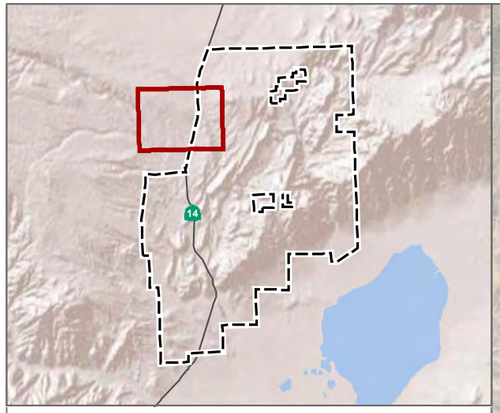
Appendix A - 2

Biological Resources



Red Rock Canyon State Park

Wildlife

Dudek (2018)

yellow-backed spiny lizard

State Park Datasets

Mojave/Agazziz"s Desert Tortoise

Plant Points

Dudek (2018)

Death Valley sandmat

Vegetation Communities

Desert Scrub

Ambrosia dumosa

Atriplex polycarpa

Larrea tridentata

Larrea tridentata - Ambrosia dumosa

Riparian

Lepidospartum squamatum

Other Land Cover

Urban

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

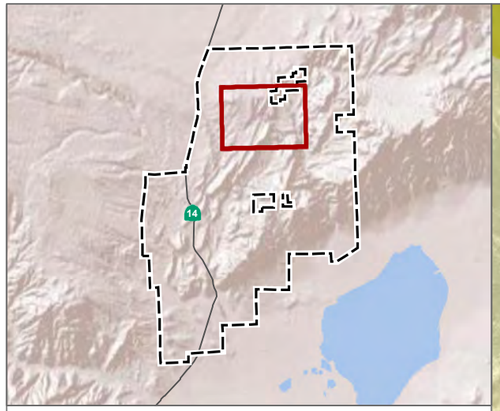
DUDEK

0 0.075 0.15 Miles

Appendix A - 3

Biological Resources

Red Rock Canyon State Park - Biological Resources Report



Red Rock Canyon State Park

Wildlife

CNDDB (2018)
- Mohave ground squirrel

DRECP (2016)
- Mohave ground squirrel

Dudek (2018)
- Desert Horned Lizard
- Willow Flycatcher
- loggerhead shrike

State Park Datasets
- Mojave/Agazziz"s Desert Tortoise

Plant Points

Dudek (2018)
- Red Rock tarplant

CNDDB (2018)
- Charlotte's phacelia
- Red Rock Canyon monkeyflower
- Red Rock poppy
- Red Rock tarplant

State Parks (2019)
- Red Rock poppy
- Red Rock Canyon monkeyflower

Plant Polygons

Dudek (2018)
- Red Rock Canyon monkeyflower
- Red Rock tarplant

State Park Datasets
- Mojave Fish-hook cactus
- Red Rock poppy
- Red Rock tarplant

Vegetation Communities

Desert Scrub
- Ambrosia dumosa
- Atriplex polycarpa
- Grayia spinosa
- Krascheninnikovia lanata
- Larrea tridentata
- Larrea tridentata - Ambrosia dumosa
- Yucca brevifolia

Riparian
- Ambrosia salsola
- Ericameria paniculata
- Lepidospartum squamatum
- Salix laevigata

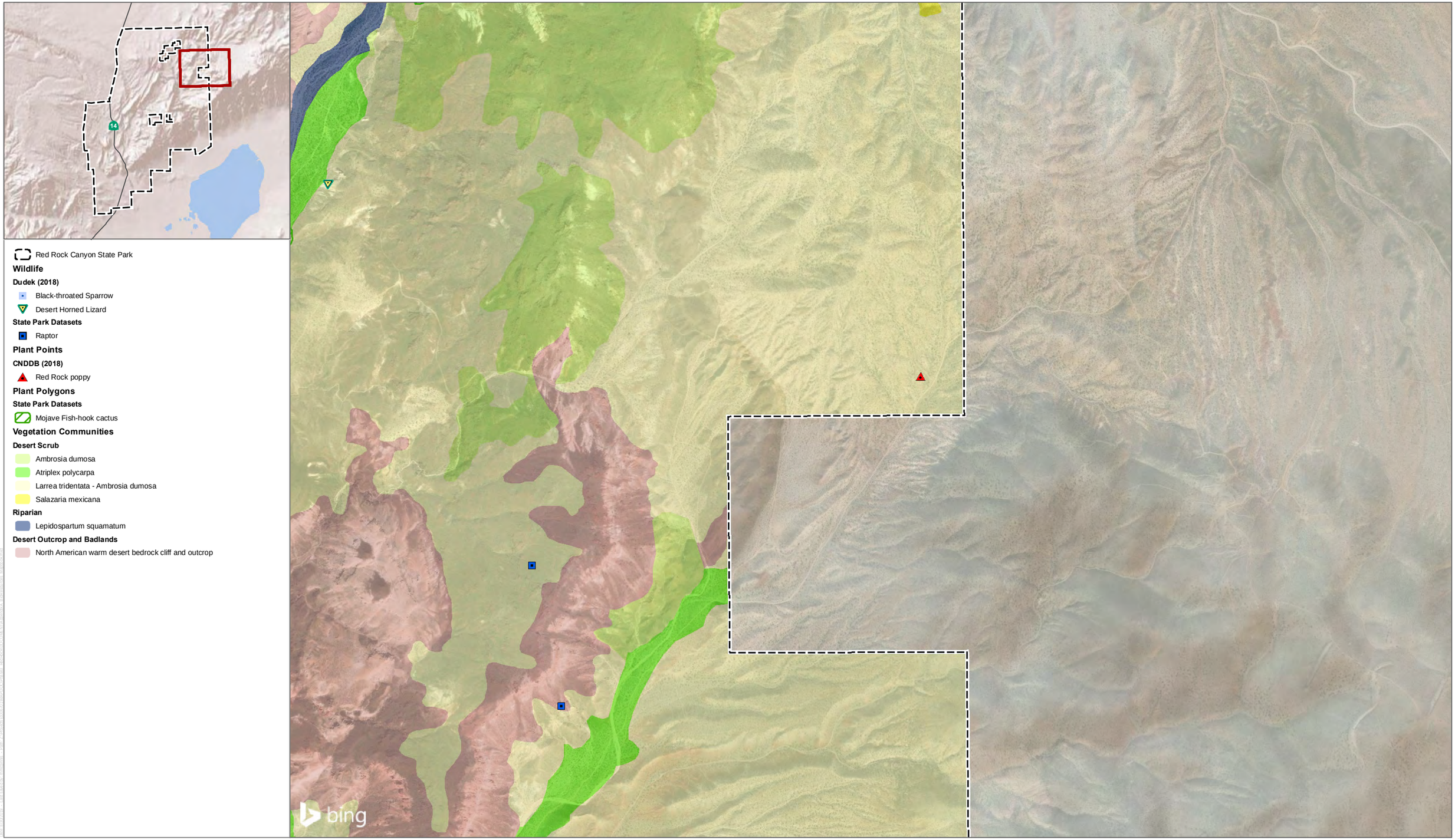
Desert Outcrop and Badlands
- North American warm desert bedrock cliff and outcrop

Other Land Cover
- Urban
- Disturbed

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles



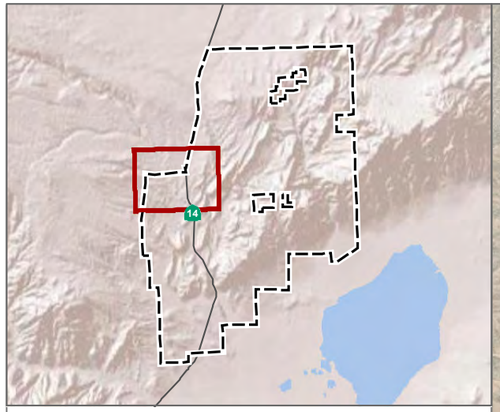
SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles

Appendix A - 5

Biological Resources



Red Rock Canyon State Park

Wildlife

CNDDB (2018)
- Le Conte's thrasher

Dudek (2018)
- Desert Horned Lizard
- Rock Wren
- loggerhead shrike
- white-tailed antelope squirrel
- yellow-backed spiny lizard
- zebra-tailed lizard

State Park Datasets
- Raptor

Plant Points

Dudek (2018)
- Death Valley sandmat
- solitary blazing star

CNDDB (2018)
- Charlotte's phacelia
- Red Rock tarplant
- creamy blazing star

Plant Polygons

State Park Datasets
- Mojave Fish-hook cactus
- Mojave spine flower

Vegetation Communities

Desert Scrub
- Ambrosia dumosa
- Atriplex confertifolia
- Atriplex polycarpa
- Larrea tridentata
- Larrea tridentata - Ambrosia dumosa
- Yucca brevifolia

Riparian
- Ericameria paniculata
- Lepidospartum squamatum

Desert Outcrop and Badlands
- North American warm desert bedrock cliff and outcrop

Other Land Cover
- Urban

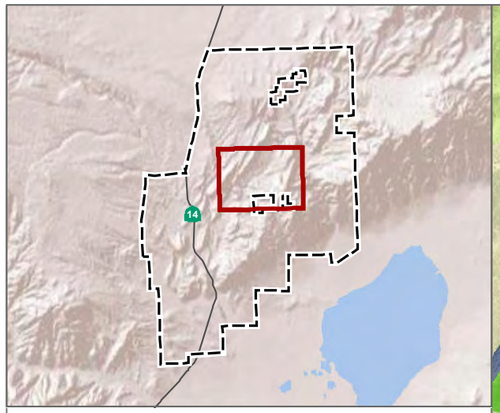
SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DREP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles

Appendix A - 6

Biological Resources



Red Rock Canyon State Park

Wildlife

BLM (2012)

golden eagle nests

Dudek (2018)

Great-horned Owl

Mojave/Agazziz"s Desert Tortoise

loggerhead shrike

State Park Datasets

Mojave/Agazziz"s Desert Tortoise

Raptor

Plant Points

Dudek (2018)

Red Rock Canyon monkeyflower

CNDDB (2018)

Charlotte's phacelia

Red Rock tarplant

State Parks (2019)

Crowned muilla

Red Rock poppy

Lemmon's jewelflower

Red Rock Canyon monkeyflower

Solitary blazing star

Plant Polygons

State Park Datasets

Cottontop cactus

Mojave Fish-hook cactus

Mojave spine flower

Vegetation Communities

Desert Scrub

Ambrosia dumosa

Atriplex confertifolia

Atriplex polycarpa

Coleogyne ramosissima

Larrea tridentata - Ambrosia dumosa

Yucca brevifolia

Riparian

Ambrosia salsola

Lepidospartum squamatum

Madrean Warm Semi-Desert Wash Woodland/Scrub

Desert Outcrop and Badlands

North American warm desert bedrock cliff and outcrop

Other Land Cover

Disturbed

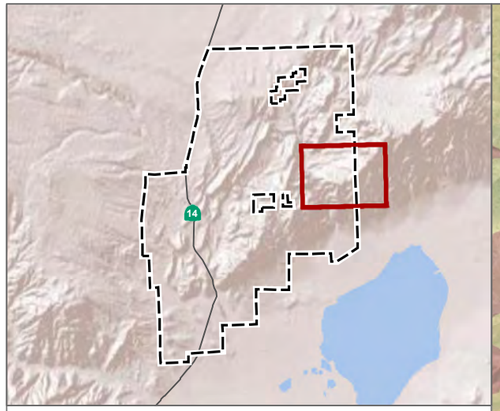
SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles

Appendix A - 7

Biological Resources



Red Rock Canyon State Park

Wildlife

Dudek (2018)

- Black-throated Sparrow
- Desert Iguana

State Park Datasets

- Mojave/Agazziz"s Desert Tortoise
- Raptor

Plant Points

CNDDB (2018)

- Charlotte's phacelia
- Red Rock poppy
- Red Rock tarplant

State Parks (2019)

- Red Rock poppy
- Lemmon's jewelflower
- Solitary blazing star

Plant Polygons

State Park Datasets

- Charlotte's phacelia
- Cottontop cactus
- Mojave Fish-hook cactus
- Red Rock poppy

Vegetation Communities

Desert Scrub

- Ambrosia dumosa
- Atriplex polycarpa
- Larrea tridentata - Ambrosia dumosa

Riparian

- Ambrosia salsola
- Ericameria paniculata

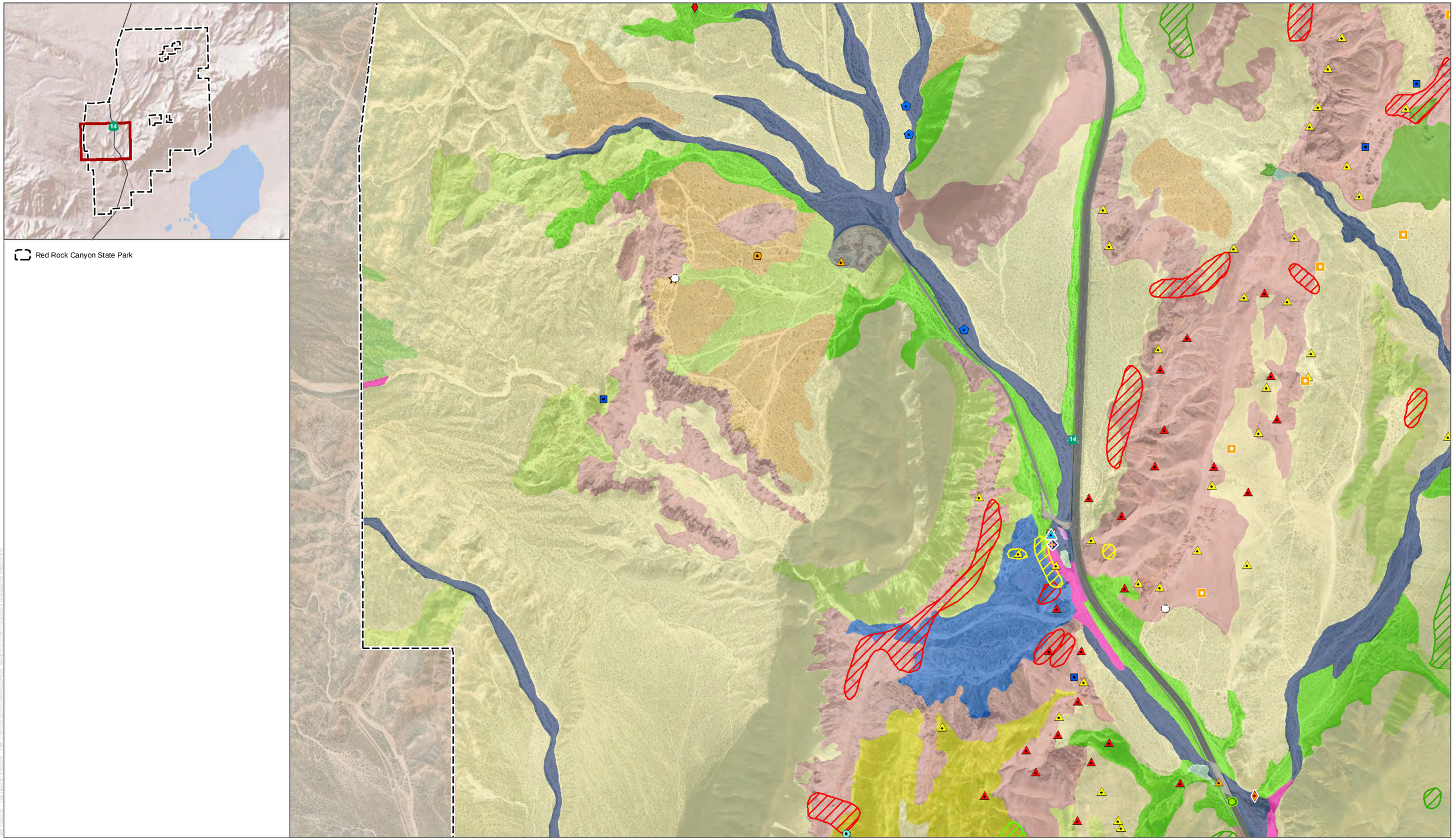
Desert Outcrop and Badlands

- North American warm desert bedrock cliff and outcrop

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles



SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

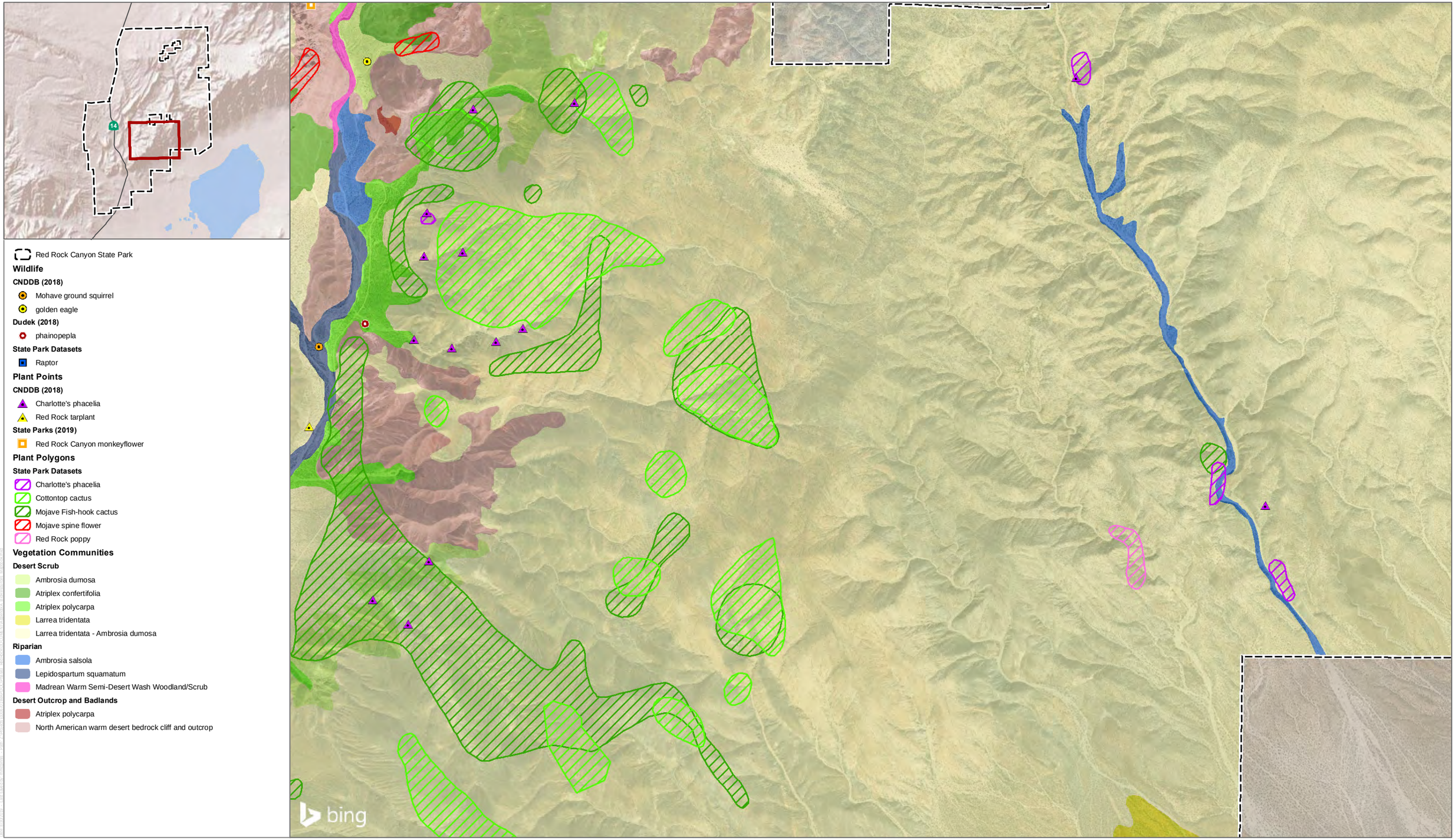
DUDEK

0 0.075 0.15 Miles

Appendix A - 9

Biological Resources

Red Rock Canyon State Park - Biological Resources Report



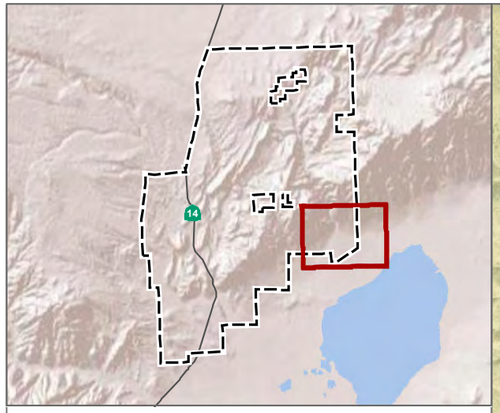
SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles

Appendix A - 10

Biological Resources



Red Rock Canyon State Park

Wildlife

Dudek (2018)

white-tailed antelope squirrel

Plant Points

CNDDB (2018)

Charlotte's phacelia

Plant Polygons

State Park Datasets

Charlotte's phacelia

Cottontop cactus

Vegetation Communities

Desert Scrub

Atriplex polycarpa

Larrea tridentata - Ambrosia dumosa

Riparian

Ericameria paniculata

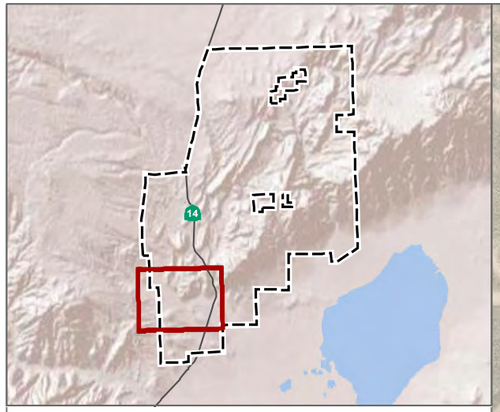
Other Land Cover

Urban

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

0 0.075 0.15 Miles



Red Rock Canyon State Park

Wildlife

CNDDB (2018)
- American badger
- Mohave ground squirrel
- golden eagle
- pallid bat
- spotted bat

DRECP (2016)
- Townsend's big-eared bat

Dudek (2018)
- Bewick's Wren
- Great-horned Owl
- white-tailed antelope squirrel

State Park Datasets
- Bats
- Raptor

Plant Points

CNDDB (2018)
- Charlotte's phacelia
- Red Rock Canyon monkeyflower
- Red Rock poppy
- Red Rock tarplant
- alkali mariposa-lily

State Parks (2019)
- Mojave Fish-hook cactus
- Red Rock Canyon monkeyflower

Plant Polygons

State Park Datasets
- Charlotte's phacelia
- State Parks, Mojave spineflower
- Cottontop cactus
- Mojave Fish-hook cactus
- Mojave spine flower
- Red Rock tarplant

Vegetation Communities

Desert Scrub
- Ambrosia dumosa
- Atriplex polycarpa
- Larrea tridentata
- Larrea tridentata - Ambrosia dumosa

Riparian
- Ambrosia salsola
- Ericameria paniculata
- Lepidospartum squamatum
- Madrean Warm Semi-Desert Wash Woodland/Scrub

Desert Outcrop and Badlands
- North American warm desert bedrock cliff and outcrop

Other Land Cover
- Urban

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

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Appendix A - 12

Biological Resources

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

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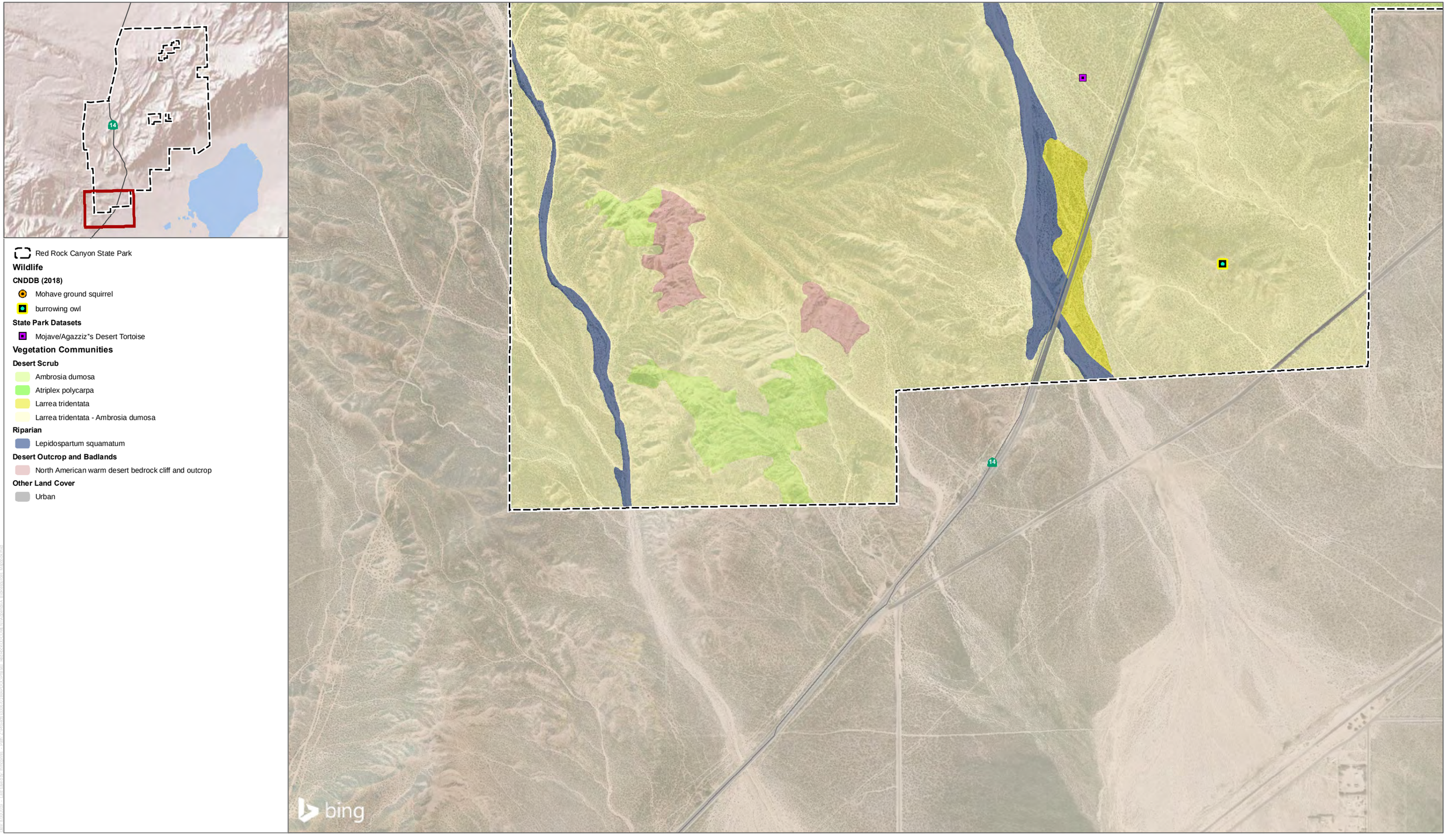

SOURCE: Bing Maps 2018; CDFW 2018; California State Parks 2018; DRECP 2016; BLM 2012

DUDEK

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APPENDIX B

Plant Species List

APPENDIX B
PLANT COMPENDIUM

EUDICOTS

VASCULAR SPECIES

AMARANTHACEAE—AMARANTH FAMILY

* *Amaranthus albus*—prostrate pigweed

Tidestromia suffruticosa var. *oblongifolia*—Arizona honey sweet

APIACEAE—CARROT FAMILY

Cymopterus deserticola—desert cymopterus

Lomatium mohavense—Mojave desertparsley

APOCYNACEAE—DOGBANE FAMILY

Asclepias erosa—desert milkweed

ASTERACEAE—SUNFLOWER FAMILY

Acamptopappus sphaerocephalus var. *hirtellus*—rayless goldenhead

Ambrosia acanthicarpa—flatspine bur ragweed

Ambrosia dumosa—white bursage

Ambrosia salsola var. *salsola*—burrobrush

Ambrosia salsola—cheesebush

Anisocoma acaulis—scalebud

Artemisia spinescens—bud sagebrush

Baccharis salicifolia ssp. *salicifolia*—mulefat

Baccharis sergiloides—broom baccharis

Bebbia juncea var. *aspera*—sweetbush

Brickellia californica—California brickellbush

Brickellia desertorum—desert brickellbush

Calycoseris parryi—yellow tackstem

* *Centaurea benedicta*—blessed thistle

Chaenactis carphoclinia var. *carphoclinia*—pebble pincushion

Chaenactis fremontii—pincushion flower

Chaenactis macrantha—bighead dustymaiden

Deinandra arida—Red Rock tarplant

Deinandra kelloggii—Kellogg's tarweed

Dicoria canescens—desert twinbugs

Encelia actoni—Acton's brittlebush

Ericameria cooperi var. *cooperi*—Cooper's goldenbush

Ericameria linearifolia—narrowleaf goldenbush

Ericameria nauseosa var. *mohavensis*—Mojave rabbitbrush

Ericameria nauseosa var. *oreophila*—rubber rabbitbrush

Ericameria paniculata—black-stem rabbitbrush
Ericameria teretifolia—needleleaf rabbitbrush
* *Erigeron bonariensis*—asthmaweed
Eriophyllum ambiguum var. *paleaceum*—beautiful woolly sunflower
Eriophyllum pringlei—Pringle's woolly sunflower
Eriophyllum wallacei—woolly easterbonnets
Glyptopleura marginata—carveseed
Glyptopleura setulosa—holy dandelion
Gnaphalium palustre—western marsh cudweed
Gutierrezia microcephala—threadleaf snakeweed
* *Lactuca serriola*—prickly lettuce
Lasthenia californica—California goldfields
Lasthenia gracilis—needle goldfields
Layia glandulosa—whitedaisy tidytips
Layia heterotricha—pale-yellow layia
Lepidospartum squamatum—scale broom
Leptosyne bigelovii—Bigelow's tickseed
Leptosyne californica—California tickseed
Lessingia glandulifera var. *peirsonii*—valley lessingia
Lessingia glandulifera—valley lessingia
Leucosyris carnosa—no common name
Logfia depressa—dwarf cottonrose
Malacothrix coulteri—snake's head
Malacothrix glabrata—smooth desertdandelion
Malacothrix sonchoides—sowthistle desertdandelion
* *Matricaria discoidea*—disc mayweed
Monolopia lanceolata—common monolopia
Monoptilon bellidiforme—daisy desertstar
Monoptilon bellioides—Mojave desertstar
Nicolletia occidentalis—Mojave hole-in-the-sand plant
Perityle emoryi—Emory's rockdaisy
Peucephyllum schottii—Schott's pygmycedar
Prenanthella exigua—brightwhite
Psathyrotes annua—annual psathyrotes
Rafinesquia neomexicana—New Mexico plumeseed
* *Sonchus asper*—spiny sowthistle
Stephanomeria exigua—small wirelettuce
Stephanomeria parryi—Parry's wirelettuce
Stephanomeria pauciflora—brownplume wirelettuce
Stylocline psilocarphoides—baretwig neststraw

Syntrichopappus fremontii—yellowray Fremont's-gold
Tetradymia axillaris—longspine horsebrush
Tetradymia glabrata—littleleaf horsebrush
Tetradymia stenolepis—Mojave cottonthorn
Uropappus lindleyi—Lindley's silverpuffs
Xylorhiza tortifolia var. *tortifolia*—Mojave woodyaster
Xylorhiza tortifolia—Mojave woodyaster

BORAGINACEAE—BORAGE FAMILY

Amsinckia intermedia—common fiddleneck
Amsinckia tessellata—bristly fiddleneck
Amsinckia vernicosa—green fiddleneck
Cryptantha circumscissa var. *circumscissa*—cushion cryptantha
Cryptantha decipiens—gravelbar cryptantha
Cryptantha dumetorum—bushloving cryptantha
Cryptantha micrantha—redroot cryptantha
Cryptantha mohavensis—Mojave cryptantha
Cryptantha nevadensis var. *nevadensis*—Nevada cryptantha
Cryptantha oxygona—sharpnut cryptantha
Cryptantha pterocarya var. *pterocarya*—wingnut cryptantha
Cryptantha similis—desert cryptantha
Cryptantha utahensis—scented cryptantha
Emmenanthe penduliflora var. *penduliflora*—whisperingbells
Eucrypta chrysanthemifolia var. *bipinnatifida*—spotted hideseed
Eucrypta micrantha—dainty desert hideseed
Heliotropium curassavicum var. *oculatum*—seaside heliotrope
Heliotropium curassavicum—salt heliotrope
Nama demissa—no common name
Nama depressa—no common name
Pectocarya heterocarpa—chuckwalla combseed
Pectocarya linearis ssp. *ferocula*—sagebrush combseed
Pectocarya penicillata—sleeping combseed
Pectocarya platycarpa—broadfruit combseed
Pectocarya recurvata—curvenut combseed
Pectocarya setosa—moth combseed
Phacelia distans—distant phacelia
Phacelia fremontii—Fremont's phacelia
Phacelia nashiana—Charlotte's phacelia
Phacelia pachyphylla—blacktack phacelia
Phacelia ramosissima—branching phacelia

Phacelia rotundifolia—roundleaf phacelia
Phacelia tanacetifolia—lacy phacelia
Phacelia vallis-mortae—Death Valley phacelia
Pholisma arenarium—desert christmas tree
Pholistoma membranaceum—white fiestaflower
Plagiobothrys arizonicus—Arizona popcornflower
Plagiobothrys jonesii—Mojave popcornflower
Tiquilia nuttallii—Nuttall's crinklemat

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard
* *Capsella bursa-pastoris*—shepherd's purse
Caulanthus cooperi—Cooper's wild cabbage
Caulanthus inflatus—desert candle
Caulanthus lasiophyllus—California mustard
Caulanthus lemmonii—Lemmon's jewelflower
Descurainia pinnata—western tansymustard
* *Descurainia sophia*—herb sophia
Dithyrea californica—California shieldpod
Erysimum capitatum var. *capitatum*—sanddune wallflower
* *Hirschfeldia incana*—shortpod mustard
Lepidium dictyotum—alkali pepperweed
Lepidium flavum—yellow pepperweed
Lepidium fremontii—desert pepperweed
Lepidium lasiocarpum—shaggyfruit pepperweed
Lepidium nitidum—shining pepperweed
* *Sisymbrium altissimum*—tall tumblemustard
* *Sisymbrium orientale*—Indian hedgemustard
Stanleya pinnata var. *pinnata*—desert princesplume
Streptanthella longirostris—longbeak streptanthella
Thysanocarpus curvipes—sand fringepod
Tropidocarpum gracile—dobie pod

CACTACEAE—CACTUS FAMILY

Cylindropuntia echinocarpa—Wiggins' cholla
Echinocactus polycephalus var. *polycephalus*—cottontop cactus
Opuntia basilaris var. *basilaris*—beavertail pricklypear
Sclerocactus polyancistrus—Mojave fish-hook cactus

CAMPANULACEAE—BELLFLOWER FAMILY

Nemacladus gracilis—slender nemacladus
Nemacladus orientalis—glandular threadplant
Nemacladus rubescens—desert threadplant
Nemacladus sigmoideus—sigmoid threadplant

CARYOPHYLLACEAE—PINK FAMILY

Loeflingia squarrosa—spreading pygmyleaf
Sagina decumbens ssp. *occidentalis*—western pearlwort
Spergularia atrosperma—blackseed sandspurry
Spergularia marina—salt sandspurry

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex canescens—fourwing saltbush
Atriplex confertifolia—shadscale
Atriplex hymenelytra—desert holly
Atriplex parryi—Parry's saltbush
Atriplex polycarpa—allscale
* *Atriplex rosea*—tumbling saltweed
Atriplex serenana var. serenana—bractscale
* *Bassia hyssopifolia*—fivehorn smotherweed
Chenopodium leptophyllum—narrowleaf goosefoot
Grayia spinosa—spiny hop sage
Krascheninnikovia lanata—winterfat
Monolepis nuttalliana—Nuttall's povertyweed
* *Salsola paulsenii*—barbwire Russian thistle
* *Salsola tragus*—prickly Russian thistle
Stutzia covillei—no common name

CLEOMACEAE—CLEOME FAMILY

Peritoma arborea—bladderpod spiderflower

CONVOLVULACEAE—MORNING-GLORY FAMILY

Cuscuta denticulata—desert dodder

CUCURBITACEAE—GOURD FAMILY

Cucurbita palmata—coyote gourd

EUPHORBIACEAE—SPURGE FAMILY

Croton setiger—dove weed
Euphorbia albomarginata—whitemargin sandmat

Euphorbia setiloba—Yuma sandmat
Euphorbia vallis-mortae—Death Valley sandmat
Stillingia paucidentata—Mojave toothleaf

FABACEAE—LEGUME FAMILY

Acmispon brachycarpus—foothill deervetch
Acmispon maritimus var. *brevivexillus*—coastal bird's-foot trefoil
Astragalus didymocarpus var. *dispermus*—dwarf white milkvetch
Astragalus lentiginosus var. *variabilis*—freckled milkvetch
Astragalus pachypus—thickpod milkvetch
Lupinus albifrons var. *albifrons*—silver lupine
Lupinus concinnus—bajada lupine
Lupinus excubitus var. *excubitus*—grape soda lupine
Lupinus microcarpus var. *horizontalis*—sunset lupine
Lupinus odoratus—Mojave lupine
Lupinus shockleyi—purple desert lupine
* *Medicago sativa*—alfalfa
Prosopis glandulosa var. *torreyana*—western honey mesquite
Psorothamnus arborescens var. *minutifolius*—Johnson's indigobush
Psorothamnus arborescens—Mojave indigobush
Psorothamnus fremontii var. fremontii—Fremont's dalea
Senna armata—desertsenna

GERANIACEAE—GERANIUM FAMILY

* *Erodium cicutarium*—redstem stork's bill
Erodium texanum—Texas stork's bill

LAMIACEAE—MINT FAMILY

Salvia carduacea—thistle sage
Salvia columbariae—chia
Salvia dorrii var. *dorrii*—purple sage
Scutellaria mexicana—bladder sage

LOASACEAE—LOASA FAMILY

Eucnide urens—desert stingbush
Mentzelia affinis—yellowcomet
Mentzelia albicaulis—whitestem blazingstar
Mentzelia eremophila—solitary blazing star
Mentzelia involucrata—whitebract blazingstar
Mentzelia nitens—shining blazingstar
Mentzelia tricuspis—spiny-hair blazing star

Mentzelia tridentata—creamy blazing star
Petalonyx nitidus—shinyleaf sandpaper plant
Petalonyx thurberi ssp. *thurberi*—Thurber's sandpaper plant
Petalonyx thurberi—Thurber's sandpaper plant

MALVACEAE—MALLOW FAMILY

Eremalche exilis—white mallow
Eremalche rotundifolia—desert fivespot
Sphaeralcea ambigua—desert globemallow

MONTIACEAE—MONTIA FAMILY

Calandrinia menziesii—red maids
Calyptridium monandrum—common pussypaws
Claytonia parviflora—streambank springbeauty

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

Abronia pogonantha—Mojave sand verbena
Mirabilis laevis var. *retrorsa*—wishbone-bush

ONAGRACEAE—EVENING PRIMROSE FAMILY

Camissonia campestris ssp. *campestris*—Mojave suncup
Camissonia kernensis ssp. *gilmanii*—Gilman's evening primrose
Camissonia kernensis ssp. *kernensis*—Kern County evening-primrose
Chylismia claviformis ssp. *claviformis*—no common name
Eremothera boothii ssp. *condensata*—shredding suncup
Eremothera boothii ssp. *desertorum*—desert suncup
Eremothera boothii—Booth's evening primrose
Oenothera californica—California evening primrose
Oenothera cespitosa—tufted evening primrose
Oenothera deltoides—birdcage evening primrose
Oenothera primiveris—desert evening primrose
Tetrapteron palmeri—Palmer evening primrose

OROBANCHACEAE—BROOM-RAPE FAMILY

Castilleja chromosa—northwestern Indian paintbrush
Castilleja exserta ssp. *venusta*—exserted Indian paintbrush

PAPAVERACEAE—POPPY FAMILY

Argemone munita—flatbud pricklypoppy
Eschscholzia californica—California poppy
Eschscholzia minutiflora ssp. *covillei*—Coville's pygmy poppy

Eschscholzia minutiflora ssp. minutiflora—pygmy poppy
Eschscholzia minutiflora ssp. twisselmannii—Red Rock poppy
Eschscholzia minutiflora—pygmy poppy
Platystemon californicus—creamcups

PHRYMACEAE—LOPSEED FAMILY

Diplacus bigelovii—Bigelow's monkeyflower
Erythranthe guttata—common monkey flower
Erythranthe palmeri—Palmer's monkeyflower
Erythranthe rhodopetra—Red Rock Canyon monkeyflower

PLANTAGINACEAE—PLANTAIN FAMILY

Mohavea breviflora—golden desert-snapdragon
Plantago ovata—desert Indianwheat

POLEMONIACEAE—PHLOX FAMILY

Aliciella hutchinsifolia—desert pale gilia
Aliciella latifolia—broad-leaf gilia
Aliciella leptomeria—sand gilia
Aliciella lottiae—Lott's gilia
Aliciella micromeria—dainty gilia
Allophyllum gilioides ssp. *violaceum*—dense false gilyflower
Eriastrum densifolium ssp. *densifolium*—giant woollystar
Eriastrum densifolium ssp. *mohavense*—giant woollystar
Eriastrum diffusum—miniature woollystar
Eriastrum eremicum—desert woollystar
Eriastrum pluriflorum—Tehachapi woollystar
Gilia aliquanta—puffcalyx gilia
Gilia brecciarum ssp. *neglecta*—Nevada gilia
Gilia cana ssp. *speciosa*—showy gilia
Gilia latiflora—hollyleaf gilia
Gilia malior—scrub gilia
Gilia scopulorum—rock gilia
Gilia sinuata—rosy gilia
Gilia stellata—star gilia
Leptosiphon aureus—golden linanthus
Linanthus bigelovii—Bigelow's linanthus
Linanthus dichotomus—eveningsnow
Linanthus filiformis—yellow gilia
Linanthus parryae—sandblossoms

Loeseliastrum matthewsii—desert calico
Loeseliastrum schottii—Schott's calico

POLYGONACEAE—BUCKWHEAT FAMILY

Centrostegia thurberi—red triangles
Chorizanthe brevicornu—brittle spineflower
Chorizanthe rigida—devil's spineflower
Chorizanthe spinosa—Mojave spineflower
Chorizanthe watsonii—fivetooth spineflower
Eriogonum angulosum—anglestem buckwheat
Eriogonum brachyanthum—shortflower buckwheat
Eriogonum brachypodum—Parry's buckwheat
Eriogonum deflexum var. *baratum*—flatcrown buckwheat
Eriogonum fasciculatum var. *polifolium*—California buckwheat
Eriogonum gracillimum—rose and white buckwheat
Eriogonum inflatum—desert trumpet
Eriogonum maculatum—spotted buckwheat
Eriogonum mohavense—Western Mojave buckwheat
Eriogonum nidularium—birdnest buckwheat
Eriogonum nudum var. *westonii*—Weston's buckwheat
Eriogonum ovalifolium—cushion buckwheat
Eriogonum plumatella—yucca buckwheat
Eriogonum pusillum—yellowturbans
Eriogonum reniforme—kidneyleaf buckwheat
Eriogonum trichopes—little deserttrumpet
Eriogonum viridescens—twotooth buckwheat
Mucronea perfoliata—perfoliate spineflower
Oxytheca perfoliata—roundleaf oxytheca
Rumex hymenosepalus—canaigre dock

RANUNCULACEAE—BUTTERCUP FAMILY

Delphinium parishii ssp. *parishii*—Parish's larkspur

ROSACEAE—ROSE FAMILY

Coleogyne ramosissima—black brush

SALICACEAE—WILLOW FAMILY

Populus fremontii—Fremont cottonwood
Salix laevigata—red willow
Salix lasiolepis—arroyo willow

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple
Lycium andersonii—Anderson's boxthorn
Lycium cooperi—peach thorn

TAMARICACEAE—TAMARISK FAMILY

* *Tamarix aphylla*—Athel tamarisk
* *Tamarix parviflora*—smallflower tamarisk
* *Tamarix ramosissima*—tamarisk

ZYGOPHYLLACEAE—CALTROP FAMILY

Larrea tridentata—creosote bush

FERNS AND FERN ALLIES

VASCULAR SPECIES

PTERIDACEAE—BRAKE FAMILY

Myriopteris viscida—viscid lace fern

GYMNOSPERMS AND GNETOPHYTES

VASCULAR SPECIES

EPHEDRACEAE—EPHEDRA FAMILY

Ephedra nevadensis—Nevada joint fir

MONOCOTS

VASCULAR SPECIES

AGAVACEAE—AGAVE FAMILY

Yucca brevifolia—Joshua tree

ALLIACEAE—ONION FAMILY

Allium fimbriatum var. *fimbriatum*—fringed onion
Allium fimbriatum var. *mohavense*—Mojave fringed onion
Allium lacunosum var. *davisiae*—pitted onion

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

CYPERACEAE—SEDGE FAMILY

Bolboschoenus maritimus—salt bulrush
Eleocharis parishii—Parish's spikerush
Schoenoplectus americanus—American bulrush
Schoenoplectus pungens var. *longispicatus*—common threesquare

JUNCACEAE—RUSH FAMILY

Juncus balticus ssp. *ater*—Baltic rush
Juncus bufonius var. *occidentalis*—toad rush

JUNCAGINACEAE—ARROW-GRASS FAMILY

Triglochin concinna var. *debilis*—no common name

LILIACEAE—LILY FAMILY

Calochortus kennedyi var. *kennedyi*—desert mariposa lily
Calochortus striatus—alkali mariposa lily

MELANTHIACEAE—FALSE HELLEBORE FAMILY

Toxicoscordion brevibracteatum—desert deathcamas

POACEAE—GRASS FAMILY

* *Avena barbata*—slender oat
Bromus arizonicus—Arizona brome
* *Bromus diandrus*—ripgut brome
* *Bromus madritensis* ssp. *rubens*—red brome
* *Bromus madritensis*—compact brome
* *Bromus tectorum*—cheatgrass
* *Chloris virgata*—feather fingergrass
* *Cynodon dactylon*—Bermudagrass
Deschampsia danthonioides—annual hairgrass
Distichlis spicata—salt grass
Elymus elymoides var. *brevifolius*—squirreltail
Festuca microstachys—six-weeks fescue
Festuca octoflora—sixweeks fescue
Hordeum depressum—dwarf barley
* *Hordeum murinum* ssp. *glaucum*—smooth barley
* *Hordeum murinum*—mouse barley
Melica imperfecta—smallflower melicgrass
Muhlenbergia asperifolia—scratchgrass
Poa bigelovii—Bigelow's bluegrass
Poa fendleriana ssp. *longiligula*—muttongrass

Poa secunda ssp. *secunda*—Sandberg bluegrass
Poa secunda—curly blue grass
* *Polypogon monspeliensis*—annual rabbitsfoot grass
* *Schismus arabicus*—Arabian schismus
* *Schismus barbatus*—common Mediterranean grass
Sporobolus airoides—alkali sacaton
Stipa hymenoides—Indian rice grass
Stipa speciosa—desert needlegrass
* *Triticum aestivum*—common wheat

THEMIDACEAE—BRODIAEA FAMILY

Dichelostemma capitatum—bluedicks
Muilla coronata—crowned muilla

TYPHACEAE—CATTAIL FAMILY

Typha domingensis—southern cattail

* signifies introduced (non-native) species

APPENDIX C

Wildlife Species List

APPENDIX C
Wildlife Compendium

BIRD

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Empidonax traillii—willow flycatcher

Sayornis saya—Say's phoebe

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis—red-tailed hawk

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Corvus brachyrhynchos—American crow

Corvus corax—common raven

LARKS

ALAUDIDAE—LARKS

Eremophila alpestris—horned lark

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

Oreoscoptes montanus—sage thrasher

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

OWLS

STRIGIDAE—TYPICAL OWLS

Bubo virginianus—great horned owl

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

SHRIKES

LANIIDAE—SHRIKES

Lanius ludovicianus—loggerhead shrike

SILKY FLYCATCHERS

PTILOGONATIDAE—SILKY-FLYCATCHERS

Phainopepla nitens—phainopepla

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—white-throated swift

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Cardellina pusilla—Wilson's warbler

WRENS

TROGLODYTIDAE—WRENS

Salpinctes obsoletus—rock wren

Thryomanes bewickii—Bewick's wren

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Amphispiza bilineata—black-throated sparrow
Chondestes grammacus—lark sparrow

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Lepus californicus—black-tailed jackrabbit
Sylvilagus audubonii—desert cottontail

SQUIRRELS

SCIURIDAE—SQUIRRELS

Ammospermophilus leucurus—white-tailed antelope squirrel

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Callisaurus draconoides—zebra-tailed lizard
Phrynosoma platyrhinos—desert horned lizard
Sceloporus uniformus—yellow-backed spiny lizard
Uta stanburiana—common side-blotched lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis tigris tigris—Great Basin whiptail

CROTAP*HYTIDAE—COLLARED LIZARDS*

Gambelia wislizenii—long-nosed leopard lizard

IGUANIDAE—IGUANAS

Dipsosaurus dorsalis—desert iguana

SNAKES

COLUBRIDAE—COLUBRID SNAKES

Coluber flagellum piceus—Red Racer

TURTLES

TESTUDINIDAE—TRUE LAND TORTOISES

Gopherus agassizii—Mohave Desert tortoise

APPENDIX D

Special-Status Plant Species Potential to Occur

APPENDIX D
Special-Status Plant Species Potential to Occur

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Allium shevockii	Spanish Needle onion	None/None/1B.3	Pinyon and juniper woodland, Upper montane coniferous forest; rocky/perennial bulbiferous herb/May–June/2785–8200	Not expected to occur. No suitable vegetation present.
Androsace elongata ssp. *acuta*	California androsace	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland/annual herb/Mar–June/490–4280	Not expected to occur. No suitable vegetation present.
Calochortus striatus	alkali mariposa lily	None/None/1B.2	Chaparral, Chenopod scrub, Mojavean desert scrub, Meadows and seeps; alkaline, mesic/perennial bulbiferous herb/Apr–June/225–5235	Recorded in the CNDDB within the State Park.
Camissonia integrifolia	Kern River evening-primrose	None/None/1B.3	Chaparral/annual herb/(Apr)May/2295–3280	Not expected to occur. No suitable vegetation present.
Camissonia kernensis ssp. *kernensis*	Kern County evening-primrose	None/None/4.3	Chaparral, Joshua tree woodland, Pinyon and juniper woodland; sandy or gravelly, granitic/annual herb/Mar–May/2590–6990	Recorded in the CalFlora database within the State Park.
Canbya candida	white pygmy-poppy	None/None/4.2	Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland; gravelly, sandy, granitic/annual herb/Mar–June/1965–4790	Historical occurrence within the State Park from 1932 (CalFlora 2018).
Castilleja plagiotoma	Mojave paintbrush	None/None/4.3	Great Basin scrub (alluvial), Joshua tree woodland, Lower montane coniferous forest, Pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr–June/980–8200	Low potential to occur. There is suitable Joshua tree woodland present, but the nearest record is 13 miles from the State Park and records are generally concentrated in the Caliente Range area and the southern edge of the Mojave Desert where it borders the San Bernardino and San Gabriel Mountains (CCH 2018).
Caulanthus lemmonii	Lemmon's jewelflower	None/None/1B.2	Pinyon and juniper woodland, Valley and foothill grassland/annual herb/Feb–May/260–5185	Recorded within the State Park in 2019.
Chorizanthe spinosa	Mojave spineflower	None/None/4.2	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Playas; Sometimes alkaline/annual herb/Mar–July/15–4265	Recorded within the State Park (Tomlinson 2014).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Clarkia xantiana ssp. *parviflora*	Kern Canyon clarkia	None/None/4.2	Chaparral, Cismontane woodland, Great Basin scrub, Valley and foothill grassland; often sandy, sometimes rocky, slopes, sometimes roadsides/annual herb/May–June/2295–11875	Not expected to occur. No suitable vegetation present.
Claytonia lanceolata var. *peirsonii*	Peirson's spring beauty	None/None/3.1	Subalpine coniferous forest, Upper montane coniferous forest; Scree/perennial herb/(Mar)May–June/4950–9005	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Claytonia parviflora ssp. *grandiflora*	streambank spring beauty	None/None/4.2	Cismontane woodland; rocky/annual herb/Feb–May/820–3935	Not expected to occur. No suitable vegetation present.
Cordylanthus rigidus ssp. *brevibracteatus*	short-bracted bird's-beak	None/None/4.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; openings, granitic/annual herb (hemiparasitic)/July–Aug(Oct)/2000–8495	Not expected to occur. No suitable vegetation present.
Cymopterus deserticola	desert cymopterus	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; sandy/perennial herb/Mar–May/2065–4920	Low potential to occur. While there is suitable habitat and there are records of this species in the Mojave ecoregion, the nearest record is over 18 miles south of the State Park and all records are southeast of the State Park (CCH 2018).
Deinandra arida	Red Rock tarplant	None/SR/1B.2	Mojavean desert scrub (clay, volcanic tuff)/annual herb/Apr–Nov/980–3115	Recorded in the CNDDB within the State Park.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3	Chaparral, Coastal scrub, Riparian scrub; mesic/annual herb/(May)June–Oct(Jan)/2095–5250	Low potential to occur. There is limited suitable mesic habitat. The nearest record is approximately 7 miles from the State Park (CCH 2018).
Delphinium parryi ssp. *blochmaniae*	dune larkspur	None/None/1B.2	Chaparral (maritime), Coastal dunes/perennial herb/Apr–June/0–655	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Delphinium parryi ssp. purpureum	Mt. Pinos larkspur	None/None/4.3	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland/perennial herb/May–June/3280–8530	Low potential to occur. Although there is suitable desert scrub present, the nearest record is almost 40 miles from the State Park and the species' known distribution is primarily southwest of the State Park (CCH 2018).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Diplacus mohavensis	Mojave monkeyflower	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub; sandy or gravelly, often in washes/annual herb/Apr–June/1965–3935	Low potential to occur. Although there is suitable habitat mapped within the State Park for Mojave monkeyflower, the nearest record of this species is over 50 miles from the State Park and most records are concentrated around Barstow (CCH 2018), indicating that the State Park is outside of this species' known range.
Dudleya abramsii ssp. *calcicola*	limestone dudleya	None/None/4.3	Chaparral, Pinyon and juniper woodland; carbonate/perennial herb/Apr–Aug/1640–8530	Not expected to occur. No suitable vegetation present.
Eriastrum tracyi	Tracy's eriastrum	None/SR/3.2	Chaparral, Cismontane woodland, Valley and foothill grassland/annual herb/May–July/1030–5840	Not expected to occur. No suitable vegetation present.
Eriogonum kennedyi var. *pinicola*	Kern buckwheat	None/None/1B.1	Chaparral, Pinyon and juniper woodland; clay/perennial herb/May–June(July)/4395–6400	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Erythranthe rhodopetra	Red Rock Canyon monkeyflower	None/None/1B.1	Mojavean desert scrub; sandy, canyon washes/annual herb/Mar–Apr/2000–3000	Recorded in the CNDDB within the State Park.
Erythranthe shevockii	Kelso Creek monkeyflower	None/None/1B.2	Joshua tree woodland, Pinyon and juniper woodland; granitic or metamophic, sandy or gravelly/annual herb/Mar–May/2620–4395	Low potential to occur. This species has a narrow distribution mainly in the Kelso Creek area over 10 miles northwest of the State Park (CCH 2018).
Erythranthe sierrae	Sierra Nevada monkeyflower	None/None/4.2	Cismontane woodland (openings), Lower montane coniferous forest (openings), Meadows and seeps (dry); Usually granitic, usually sandy, sometimes gravelly, vernally wet depressions, swales, streambanks/annual herb/Mar–July/605–7495	Recorded in the within the State Park in 1969 along Tarweed Creek (CCH 2018).
Eschscholzia minutiflora ssp. *twisselmannii*	Red Rock poppy	None/None/1B.2	Mojavean desert scrub (volcanic tuff)/annual herb/Mar–May/2230–4035	Recorded in the CNDDB within the State Park.
Euphorbia vallis-mortae	Death Valley sandmat	None/None/4.2	Mojavean desert scrub (sandy or gravelly)/perennial herb/May–Oct/750–4790	There are four records of this species west of Hwy 14 within the State Park (CCH 2018).
Frasera tubulosa	Coville's green-gentian	None/None/4.3	Lower montane coniferous forest, Upper montane coniferous forest; Granitic, sandy/perennial herb/July–Aug/3130–10795	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Gilia interior	inland gilia	None/None/4.3	Cismontane woodland, Joshua tree woodland, Lower montane coniferous forest; rocky/annual herb/Mar,May/2295–5575	Moderate potential to occur. There is suitable Joshua tree woodland habitat and the nearest record is approximately 5 miles north of the State Park. There are several records north and northwest of the State Park (CCH 2018).
Layia heterotricha	pale-yellow layia	None/None/1B.1	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland; alkaline or clay/annual herb/Mar–June/980–5595	Not expected to occur. No suitable vegetation present.
Mentzelia eremophila	solitary blazing star	None/None/4.2	Mojavean desert scrub/annual herb/Mar–May/2295–4005	Several records of this species occur within the State Park (CCH 2018).
Mentzelia tricuspis	spiny-hair blazing star	None/None/2B.1	Mojavean desert scrub; sandy, gravelly, slopes, and washes/annual herb/Mar–May/490–4200	Recorded 2 miles north of Red Rock Canyon along Hwy 14 at the edge of the State Park (CCH 2018).
Mentzelia tridentata	creamy blazing star	None/None/1B.3	Mojavean desert scrub; rocky, gravelly, sandy/annual herb/Mar–May/2295–3855	Recorded in the CNDDB within the State Park.
Monardella linoides ssp. *oblonga*	Tehachapi monardella	None/None/1B.3	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest/perennial rhizomatous herb/(May)June–Aug/2950–8105	Not expected to occur. No suitable vegetation present.
Muilla coronata	crowned muilla	None/None/4.2	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland/perennial bulbiferous herb/Mar–Apr(May)/2195–6430	Two records of this species occur west of Hwy 14 within the State Park (CalFlora 2018).
Nemacladus secundiflorus var. secundiflorus	large-flowered nemacladus	None/None/4.3	Chaparral, Valley and foothill grassland; gravelly, openings/annual herb/Apr–June/655–6560	Not expected to occur. No suitable vegetation present.
Opuntia basilaris var. *treleasei*	Bakersfield cactus	FE/SE/1B.1	Chenopod scrub, Cismontane woodland, Valley and foothill grassland; sandy or gravelly/perennial stem succulent/Apr–May/390–4755	Low potential to occur. Not recorded in the USGS quadrangle (quad) overlapping the State Park or in the surrounding quads and there is suitable habitat mapped within the State Park for Bakersfield cactus. However, the nearest record is located near Mojave with most records concentrated around Bakersfield (CCH 2018). Therefore, the Park is out of the species' known range.
Pentachaeta fragilis	fragile pentachaeta	None/None/4.3	Chaparral, Lower montane coniferous forest (sandy); often openings/annual herb/Mar–June/145–6890	Not expected to occur. No suitable vegetation present.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Perideridia pringlei	adobe yampah	None/None/4.3	Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland; Serpentinite, often clay/perennial herb/Apr–June(July)/980–5905	Not expected to occur. No suitable vegetation present.
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; gravelly, rocky, talus/annual herb/Apr–July/0–3280	Not expected to occur. No suitable vegetation present.
Phacelia nashiana	Charlotte's phacelia	None/None/1B.2	Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland; usually granitic, sandy/annual herb/Mar–June/1965–7220	Recorded in the CNDDB within the State Park.
Plagiobryoides vinosula	wine-colored tufa moss	None/None/4.2	Cismontane woodland, Mojavean desert scrub, Meadows and seeps, Pinyon and juniper woodland, Riparian woodland; usually granitic rock or granitic soil along seeps and streams, sometimes clay/moss/N.A./95–5690	Moderate potential to occur. There is suitable desert scrub habitat, as well as seeps and streams within the State Park. The State Park is within the species' range with a record from the Cinco quadrangle just west of the State Park (CNPS 2018).
Psorothamnus arborescens var. arborescens	Mojave indigo-bush	None/None/4.3	Mojavean desert scrub, Riparian scrub/perennial deciduous shrub/Apr–May/1310–3890	A historical record of this variety occurs along Hwy 14 within the State Park, but no CNPS records occur in the vicinity (CalFlora 2018; CCH 2018; CNPS 2018).
Sclerocactus polyancistrus	Mojave fish-hook cactus	None/None/4.2	Great Basin scrub, Joshua tree woodland, Mojavean desert scrub; usually carbonate/perennial stem succulent/Apr–July/2095–7610	Recorded within the State Park (Tomlinson 2014).
Streptanthus cordatus var. piutensis	Piute Mountains jewelflower	None/None/1B.2	Broadleafed upland forest, Closed-cone coniferous forest, Pinyon and juniper woodland; clay or metamorphic/perennial herb/May–July/3590–5990	Not expected to occur. No suitable vegetation present.

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APPENDIX E

Special-Status Wildlife Species Potential to Occur

APPENDIX E
Special-Status Wildlife Species Potential to Occur

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			Reptiles	
Anniella campi	Big Spring legless lizard	None/SSC	Desert canyons and springs along western edge of the Mojave Desert in Kern and Inyo counties. Often found underneath leaf litter, rocks, and logs (CDFW 2017).	Low potential to occur. Very limited range for this species, has only been discovered in three areas within eastern Sierra Nevada, two of which are in Kern County (Papenfuss and Parham 2013). Although both areas are outside of Park, one population has been discovered only about 15 miles north in an area called Big Spring, while the other is located to the south.
Anniella stebbinsi	San Diegan legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. Smaller and disjunct northern populations of the species (closer to the Park than the southern population) has only been located in the Piute and Tehachapi mountains, as well as the area around Caliente Creek.
Gopherus agassizii	Mohave Desert tortoise	FT/ST	Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides	Recorded in the CNDDB within the Park and within a 5 mile buffer. There is also DRECP suitable habitat for this species mapped within the State Park. A shell from an expired tortoise was found in Nightmare Gulch by Dudek biologists during May 2018 surveys.
			Birds	
Agelaius tricolor (nesting colony)	tricolored blackbird	BLM:S/SC	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Moderate potential to occur. No CNDDB records within the Park, but there is DRECP suitable habitat for this species mapped within the State Park. CNDDB records show that the species has been identified within 5 miles of park, including nearby Koehn Lake.
Aquila chrysaetos (nesting & wintering)	golden eagle	BGEPA/FP	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Recorded in the CNDDB within the Park. There is also DRECP suitable habitat for this species mapped within the Park.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Asio otus (nesting)	long-eared owl	None/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Moderate potential to occur. Species has been identified within a 5 mile buffer around the Park. These owls prefer forests, grasslands, and shrublands. There is a small amount of riparian habitat on-site.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Recorded in the CNDDB within the Park. There is also suitable habitat for this species mapped within the State Park.
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Low potential to nest in the Park and foraging opportunities in the vicinity are limited. DRECP suitable habitat mapped in the State Park. The species has also been identified within a 5 mile buffer of the Park.
Charadrius montanus (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	Low potential to occur within Park, but species has been known to winter in deserts, often far from water.
Charadrius nivosus nivosus (inland); formerly *Charadrius alexandrius nivosus*	Western snowy plover	None/SSC	On coasts nests on sandy marine and estuarine shores, in the interior nests on sandy, barren, or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Low potential to occur within Park, but species has been known to winter in deserts and rarely nest at dry salt ponds.
Empidonax traillii	Willow flycatcher	FE (*E.t. extimus;* southwestern subspecies only) / SE (full species; nesting)	Nests and roosts in dense willow thickets. Uses low, exposed branches for singing posts and hunting perches.	Moderate potential to occur or migrate through the Park. A willow flycatcher was identified by Dudek biologists during May 2018 surveys in riparian habitat in the Park in Land Chance Canyon at Cudahy Camp.
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. This species range does not extend into eastern Kern County.
Falco mexicanus (nesting)	prairie falcon	BCC/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Recorded in the CNDDB within the Park and surrounding area.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Gymnogyps californianus	California Condor	FE/SE	Species requires vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.	Low potential to occur. Species is generally rare in the wild and they do not have territories. Outside of the nesting season, they often roost in a different place each night as they travel daily. Foraging may occur in the park as there is vast open space within and surrounding (Safford 2015). There is one recorded sighting of 3 birds within the park in 1978, and another sighting of 1 bird about 20km west of the park in 2010 (eBird 2018).
Icteria virens	Yellow-breasted chat	None/SSC	Nests and forages in low, dense riparian habitat consisting of willow, blackberry, and wild grape within 10' of ground. In the arid west it is often found in shrubby areas near a water source.	Moderate potential to occur. There are several riparian areas with willows in the park that provide ample breeding, nesting, and foraging opportunities.
Lanius ludovicianus (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Recorded in the Park. Multiple loggerhead shrikes were identified by Dudek biologists during surveys.
Setophaga petechial	Yellow Warbler	BCC/SSC	Nests and forages in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders, near to water.	Moderate potential to occur during breeding or migration. There are several riparian areas within the park that provide ample breeding, nesting, and foraging opportunities. The species has also been recorded within 5 miles of the park.
Toxostoma bendirei	Bendire's thrasher	BCC/SSC	Nests and forages in desert succulent shrub and Joshua tree habitat in Mojave Desert; nests in yucca, cholla, and other thorny scrubs or small trees	Moderate potential to occur, especially during breeding season. Joshua trees and other succulents within Park provide ample nesting and foraging opportunities.
Toxostoma crissale	Crissal thrasher	None/SSC	Nests and forages in desert riparian and desert wash; dense thickets of sagebrush and other shrubs such as mesquite, iron catclaw acacia, and arrowweed willow within juniper and pinyon–juniper woodlands	Recorded in the CNDDB within the Park.
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus	Recorded in the CNDDB within the Park and surrounding area.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Vireo bellii pusillus	Least Bell's vireo	FE/SE	Nests and forages in dense, shrubby, often riparian areas near a water source. Nests placed along margins of bushes or on twigs projecting into pathways, usually in willow, Baccharis, mesquite.	Low potential to occur. Although there is suitable habitat within the Park, the closest documented sightings have been at Lake Isabella, approximately 30 miles to the NW (CNDDB, eBird).
Vireo vicinior (nesting)	gray vireo	BCC/SSC	Nests and forages in pinyon–juniper woodland, oak, and chamise and redshank chaparral	Not expected to occur. No suitable vegetation present.
			Mammals	
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Recorded in the CNDDB within the Park. There is also DRECP suitable habitat for this species mapped within thePark.
Corynorhinus townsendii	Townsend's big-eared bat	None/SSC	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Recorded in the CNDDB within the Park. There is also DRECP suitable habitat for this species mapped within the Park.
Euderma maculatum	spotted bat	None/SSC	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	Recorded in the CNDDB within the Park on multiple occasions.
Eumops perotis californicus	Western mastiff bat	BLM:S/SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Low potential to occur. This species sometimes prefers dry habitats and CNDDB records show that this species has been documented slightly SW of Lake Isabella, approximately 40 miles from the Park.
Myotis ciliolabrum	Western small-footed myotis	BLM:S/none	Wide range of habitats, mostly arid wooded & brushy uplands near water, open stands in forests and woodlands. Seeks cover in caves, buildings, mines, and crevices. Requires drinking water. Feeds on a wide variety of small flying insects.	Low potential to occur. CNDDB records show that the closest record of this species to the Park is near Lake Isabella about 30 miles NW.
Myotis thysanodes	Fringed myotis	BLM:S/none	Wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	Low potential to occur. This species prefers forests, which are not present within the Park. CNDDB records show that the closest record of this species to the park is near Lake Isabella about 30 miles NW.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Myotis yumanensis	Yuma myotis	BLM:S/none	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices. Optimal habitats are open forests and woodlands with sources of water over which to feed.	Low potential to occur as this species is closely tied to water. CNDDB records show that the closest record of this species to the Park is near Lake Isabella about 30 miles NW and just north of Ridgecrest.
Onychomys torridus tularensis	Tulare grasshopper mouse	None/SSC	Low, open scrub, and semi-scrub habitats in arid Lower Sonoran associations	Recorded in the CNDDB within the State Park.
Ovis canadensis nelsoni	Desert bighorn sheep	BLM:S/FP	Open, rocky, steep areas with available water and herbaceous forage.	Not expected to occur. No occurrence records for the species occur in the Park or the vicinity and CDFW range maps for the species show that it does not occur in Kern County.
Perognathus parvus xanthonotus	yellow-eared pocket mouse	BLM:S/None	Joshua tree woodland and Great Basin sagebrush	Low potential to occur. The species is relatively uncommon but is known to inhabit canyons of Eastern Sierran slopes; and have been recorded in Joshua tree woodlands, desert scrubland, and similar dry habitats (Laabs 2001 sourced from multiple authors).
Xerospermophilus mohavensis	Mohave ground squirrel	None/ST	Desert scrub habitats including those dominated by creosote bush and burrobush, desert sink scrub, and desert saltbush scrub	Recorded in the CNDDB within the State Park. There is also DRECP suitable habitat for this species mapped within the State Park.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Recorded in the CNDDB within the State Park.

Notes:
BLM:S – Bureau of Land Management "Sensitive"
CDFW – California Department of Fish and Wildlife
SSC – Species of Special Concern
FP – Fully Protected
FT – Federally Threatened
FE – Federally Endangered
ST – State Threatened
SE – State Endangered
SC – State Candidate
USFWS:BCC – United States Fish and Wildlife Service "Bird of Conservation Concern"

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APPENDIX F

California Natural Diversity Database Forms

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2018

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Deinandra arida*

Common Name: Red Rock tarplant

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Dayton
Address: 605 Third St.
Encinitas, CA 92024
E-mail Address: kdayton@dudek.com
Phone: (760) 479-4241

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located within Red Rock Canyon State Park. See GIS data.

County: Kern Landowner / Mgr.: State Parks
Quad Name: Saltdale NW Elevation: 2,800 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'0.45"W 35°24'36.32"N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Associated with Eriogonum inflatum and Ambrosia salsola. Observed alongside, but outside of, a rocky narrow wash with Erythranthe rhodopetra.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Along a road

Threats: None identified

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2018

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Deinandra arida*

Common Name: Red Rock tarplant

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Dayton
Address: 605 Third St.
Encinitas, CA 92024
E-mail Address: kdayton@dudek.com
Phone: (760) 479-4241

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located within Red Rock Canyon State Park. See GIS data.

County: Kern Landowner / Mgr.: State Parks
Quad Name: Saltdale NW Elevation: 2,800 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'0.45"W 35°24'36.32"N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Associated with Eriogonum inflatum and Ambrosia salsola. Observed alongside, but outside of, a rocky narrow wash with Erythranthe rhodopetra.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Along a road

Threats: None identified

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2018

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Deinandra arida*

Common Name: Red Rock tarplant

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Dayton
Address: 605 Third St.
Encinitas, CA 92024
E-mail Address: kdayton@dudek.com
Phone: (760) 479-4241

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located within Red Rock Canyon State Park. See GIS data.

County: Kern Landowner / Mgr.: State Parks
Quad Name: Saltdale NW Elevation: 2,800 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'0.45"W 35°24'36.32"N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Associated with Eriogonum inflatum and Ambrosia salsola. Observed alongside, but outside of, a rocky narrow wash with Erythranthe rhodopetra.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Along a road

Threats: None identified

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2018

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Deinandra arida*

Common Name: Red Rock tarplant

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Dayton
Address: 605 Third St.
Encinitas, CA 92024
E-mail Address: kdayton@dudek.com
Phone: (760) 479-4241

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located within Red Rock Canyon State Park. See GIS data.

County: Kern Landowner / Mgr.: State Parks
Quad Name: Saltdale NW Elevation: 2,800 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'0.45"W 35°24'36.32"N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Associated with Eriogonum inflatum and Ambrosia salsola. Observed alongside, but outside of, a rocky narrow wash with Erythranthe rhodopetra.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Along a road

Threats: None identified

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 05/07/2018

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Deinandra arida*

Common Name: Red Rock tarplant

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Dayton
Address: 605 Third St.
Encinitas, CA 92024
E-mail Address: kdayton@dudek.com
Phone: (760) 479-4241

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Located within Red Rock Canyon State Park. See GIS data.

County: Kern Landowner / Mgr.: State Parks
Quad Name: Saltdale NW Elevation: 2,800 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model _____
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy _____ meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 117°56'0.45"W 35°24'36.32"N

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Associated with Eriogonum inflatum and Ambrosia salsola. Observed alongside, but outside of, a rocky narrow wash with Erythranthe rhodopetra.

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Along a road

Threats: None identified

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDB@wildlife.ca.gov

For Office Use Only
Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 3/25/2019

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Erythranthe rhodopetra

Common Name: Red Rock Canyon Monkeyflower

Species Found? (●) Yes ( ) No — If not found, why? _____

Total No. Individuals: ~~30/patch~~ 2 patches Subsequent Visit? ( ) Yes (●) No

Is this an existing NDDB occurrence? _____ Yes, Occ. # [X] No [ ] Unk.

Collection? If yes: 1901 Number — UC Davis Museum / Herbarium

Reporter: Leah Gardner
Address: 1416 9th St., Rm. 923
Sacramento, CA. 95814
E-mail Address: leah.gardner@parks.ca.gov
Phone: 916-653-3254

Plant Information

Phenology:
20% vegetative | 80% flowering | _____ % fruiting

Animal Information

_____ # adults | _____ # juveniles | _____ # larvae | _____ # egg masses | _____ # unknown

[ ] wintering [ ] breeding [ ] nesting [ ] rookery [ ] burrow site [ ] lek [ ] other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Nightmare Gulch in Red Rock Canyon State Park

County: Kern Landowner / Mgr: Cal. State Parks

Quad Name: Saltdale NW Elevation: 2776'

T 29S R 37E Sec 25, ___ 1/4 of ___ 1/4, Meridian: H( ) M(●) S( ) Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H( ) M( ) S( ) GPS Make & Model: Android phone + Bad ELF GPS

DATUM: NAD27 ( ) NAD83 (●) WGS84 ( ) Horizontal Accuracy: 13' meters/feet

Coordinate System: UTM Zone 10 ( ) UTM Zone 11 ( ) ***OR*** Geographic (Latitude & Longitude) (●)

Coordinates: 35° 39' 41"
117° 94' 85"

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

rocky S-facing slope just above wash in Nightmare Gulch with Lasthenia gracilis, Lepidium flavum

Please fill out separate form for other rare taxa seen at this site.

Site Information

Overall site/occurrence quality/viability (site + population): ( ) Excellent (●) Good ( ) Fair ( ) Poor

Immediate AND surrounding land use: State Park

Visible disturbances: none

Threats: Off-highway vehicles, foot traffic, trampling

Comments:

Determination: *(check one or more, and fill in blanks)*

[x] Keyed (cite reference): Jepson eflora
[ ] Compared with specimen housed at: _____
[x] Compared with photo / drawing in: CalPhotos
[ ] By another person (name): _____
[x] Other: Experience as a professional botanist

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[x]
Habitat	[ ]	[ ]	[x]
Diagnostic feature	[ ]	[ ]	[x]

May we obtain duplicates at our expense? (●) yes ( ) no

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
P.O. Box 944209
Sacramento, CA 94244-2090
CNDDB@wildlife.ca.gov

For Office Use Only
Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 3/26/2019

Clear Form

California Native Species Field Survey Form

Print Form

Scientific Name: Phacelia nashiana

Common Name: Charlotte's Phacelia

Species Found? (●) Yes ( ) No — If not found, why? _____

Total No. Individuals: 100+ Subsequent Visit? ( ) Yes (●) No

Is this an existing NDDB occurrence? _____ Yes, Occ. # [X] No [ ] Unk.

Collection? If yes: 1902 (Number) UC Davis (Museum / Herbarium)

Reporter: Leah Gardner
Address: 1416 9th St., Rm. 923
Sacramento, CA. 95814
E-mail Address: leah.gardner@parks.ca.gov
Phone: 916-653-3254

Plant Information
Phenology: _____ % vegetative 100% % flowering _____ % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] wintering [ ] breeding [ ] nesting [ ] rookery [ ] burrow site [ ] lek [ ] other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)
in Red Rock Canyon State Park
"Last Chance Canyon"
County: Kern Landowner / Mgr: Cal. State Parks
Quad Name: Saltdale NW Elevation: 2440'
T 29S R 37E Sec 25, ___ 1/4 of ___ 1/4, Meridian: H( ) M(●) S( ) Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H( ) M( ) S( ) GPS Make & Model: Android phone + Bad ELF GPS
DATUM: NAD27 ( ) NAD83 (●) WGS84 ( ) Horizontal Accuracy: 18' meters/feet
Coordinate System: UTM Zone 10 ( ) UTM Zone 11 ( ) ***OR*** Geographic (Latitude & Longitude) (●)
Coordinates: 35°, 37'22"
117°, 90'74"

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
W-facing slope, very rocky (granitic?), steep
mouth of Last Chance Canyon, El Paseo Mountains

Encelia actoni, Larrea tridentata, Eriogonum fasciculatum polifolium, Perityle emoryi, Lepidium fremontii, Atriplex spp.,
Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ( ) Excellent (●) Good ( ) Fair ( ) Poor
Immediate AND surrounding land use: State Park
Visible disturbances: natural erosion
Threats: Off-highway vehicles, foot traffic, trampling
Comments:

Determination: *(check one or more, and fill in blanks)*
[✓] Keyed (cite reference): Jepson eflora
[ ] Compared with specimen housed at: _____
[✓] Compared with photo / drawing in: CalPhotos
[ ] By another person (name): _____
[✓] Other: Experience as a professional botanist

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[X]
Diagnostic feature	[ ]	[ ]	[X]

May we obtain duplicates at our expense? (●) yes ( ) no

Appendix C

COMPREHENSIVE PLANT COMPENDIUM

Appendix C. Comprehensive Plant Compendium

This plant compendium is compiled from previous plant lists by Dudek in 2018 (see Appendix B – Biological Resources Report); Mark Faull in 2005 Calflora observations; and personal observations by Leah Gardner, NRD botanist, California Department of Parks and Recreation, March 29, 2019.

C.1 EUDICOTS - VASCULAR SPECIES

AMARANTHACEAE – Amaranth family

* Amaranthus albus – Pigweed amaranth
Tidestromia suffruticosa var. *oblongifolia* - Honeysweet

APIACEAE – Carrot family

Cymopterus deserticola – Desert cymopterus
Lomatium mohavense - Mohave wild parsley

APOCYNACEAE – Dogbane family

Asclepias erosa – Desert milkweed

ASTERACEAE – Sunflower family

Acamptopappus sphaerocephalus var. *hirtellus* – Rayless goldenhead
Ambrosia acanthicarpa – Annual burweed, flatspine bur ragweed
Ambrosia dumosa – White bursage
Ambrosia salsola - Cheesebush
Ambrosia salsola var. *salsola* – Burrobush
Anisocoma acaulis – Scalebud
Artemisia spinescens – Bud sage
Baccharis salicifolia ssp. *salicifolia* – Mulefat
Baccharis sergiloides – Desert baccharis, broom baccharis
Bebbia juncea var. *aspera* – Rough sweetbush
Brickellia californica – California brickelbush
Brickellia desertorum – Desert brickelbush
Calycoseris parryi – Yellow tackstem
* *Centaurea benedicta* – Blessed thistle
Chaenactis carphoclinia var. *carphoclinia* – Pebble pincushion
Chaenactis fremontii – Fremont's pincushion
Chaenactis macrantha – Mojave pincushion
Deinandra arida – Red rock tarplant
Deinandra kelloggii – Kellogg's tarweed
Dicoria canescens – Desert dicoria

Encelia actoni – Acton's brittlebush
Ericameria cooperi var. *cooperi* – Cooper's goldenbush
Ericameria linearifolia – Narrowleaf goldenbush
Ericameria nauseosa var. *mojavensis* – Mojave rabbitbrush
Ericameria nauseosa var. *oreophila* – Rubber rabbitbrush
Ericameria paniculata – Black-stem rabbitbrush
Ericameria teretifolia – Green rabbitbrush
* *Erigeron bonariensis* – Flax-leaved horseweed
Eriophyllum ambiguum var. *paleaceum* – Beautiful wooly sunflower
Eriophyllum pringlei – Pringle's wooly sunflower
Eriophyllum wallacei – Wallace's wooly sunflower, Easter bonnets
Glyptopleura marginata - Keysia
Glytopleura setulosa – Holy dandelion
Gnaphalium palustre – Lowland cudweed
Gutierrezia microcephala – Sticky snakeweed, matchweed
* *Lactuca seriola* – Prickly lettuce
Lasthenia californica – California goldfields
Lasthenia gracilis – Needle goldfields
Layia gladulosa - White layia
Layia heterotricha – Pale yellow layia
Lepidospartum squamatum – Scalebroom
Leptosyne bigelovii – Bigelow's coreopsis
Leptosyne californica – California coreopsis
Lessingia glandulifera – Valley vinegar weed
Lessingia glandulifera var. *peirsonii* – Peirson's lessingia
Leucosyris carnosa – Shrubby alkali aster
Logfia depressa – Dwarf cottonrose
Malacothrix coulteri – Snake's head
Malacothrix glabrata – Desert dandelion
Malacothrix sonchoides – Sowthistle desert dandelion
Matricaria discoidea – Pineapple weed
Monolopia lanceolata – Lance-leafed monolopia
Monoptilon bellidiforme – Desert star
Monoptilon bellioides – Mojave desert star
Nicolletia occidentalis – Western nicolletia
Perityle emoryi – Emory's rock daisy
Peucephyllum schottii - Pigmycedar
Prenanthella exigua – Thorny skeleton plant
Psathyrotes annua – Annual psathyrotes
Rafinesquia neomexicana - New Mexico plumeseed
* *Sonchus asper* – Spiny sowthistle
Stephanomeria exigua – Small wirelettuce
Stephanomeria parryi – Parry rock pink
Stephanomeria pauciflora – Brownplume wirelettuce

Stylocline psilocarphoides – Peck's stylocline
Syntrichopappus fremontii – Fremont's syntrichopappus
Tetradymia axillaris – Catclaw horsebush
Tetradymia glabrata – Little leaf horsebush
Tetradymia stenolepis – Narrow scaled felt thorn
Uropappus lindleyi – Lindley's silverpuffs
Xylorhiza tortifolia – Mojave woodyaster

BORAGINACEAE – Borage family

Amsinckia intermedia – common fiddleneck
Amsinckia tessellata – Devil's lettuce
Amsinckia vernicosa – Green fiddleneck
Cryptantha circumscissa var. *circumscissa* – Cushion cryptantha
Cryptantha decipiens – Gravel cryptantha
Cryptantha dumetorum – Bush loving cryptantha
Cryptantha micrantha – Purple root cryptantha
Cryptantha mohavensis – Mojave cryptantha
Cryptantha nevadensis var. *nevadensis* - Nevada cryptantha
Cryptantha oxygona – Sharp nut cryptantha
Cryptantha pterocarya var. *pterocarya* - Wingednut cryptantha
Cryptantha similia – Cushion cryptantha
Cryptantha utahensis – Scented forget me not
Emmenanthe penduliflora var. *penduliflora*– Whispering bells
Eucrypta chrysanthemifolia var. *bipinnatifida* – Spotted eucrypta
Eucrypta micrantha – Desert eucrypta
Heliotropium curassavicum – Salt heliotrope
Heliotropium curassavicum var. *oculatum* – Seaside heliotrope
Nama demissa – Purplemat
Nama depressa – Narrow leaved nama
Pectocarya heterocarpa – Chuckwalla pectocarya
Pectocarya linearis ssp. *ferocula* – slender combseed
Pectocrarya penicillata – Sleeping combseed
Pectocarya platycarpa – Broad nutted comb bur
Pectocarya recurvata – Arch nutted combseed
Pectocarya setosa – Moth combseed
Phacelia calthifolia – Caltha leafed phacelia
Phacelia distans – Distant phacelia
Phacelia fremontii – Fremont's phacelia
Phacelia nashiana – Charlott's phacelia
Phacelia pachyphylla – Thick leaved phacelia, blacktack phacelia
Phacelia ramosissima – Branching phacelia
Phacelia rotundifolia – Round leafed phacelia
Phacelia tanacetifolia – Tansy leafed phacelia

Phacelia vallis-mortae – Death Valley phacelia
Pholisma arenarium – Dune food
Pholistoma membranceum – White fiesta flower
Plagiobothrys arizonicus – Arizona popcorn flower
Plagiobothrys jonesii – Jone's popcorn flower
Tiquilia nuttallii – Nuttall's crinklemat

BRASSICACEAE – Mustard family

* *Brassica nigra* – Black mustard
* *Capsella bursa-pastoris* – Shepard's purse
Caulanthus cooperi – Cooper's jewelflower
Caulanthus inflatus – Desert candle
Caulanthus lasiophyllus – California mustard
Caulanthus lemmonnii – Lemon's jewelflower
Descurainia pinnata – Yellow tansy mustard
* *Descurainia sophia* – Flixweed
Dithyrea californica – Spectacle pod
Erysimum capitatum var. *capitatum*– Sand dune wallflower
Hirschfeldia incana – Shortpod mustard
Lepidium dictyotum – Net pepper grass
Lepidium flavum – Yellow pepper grass
Lepidium fremontii – Desert pepperweed
Lepidium lasiocarpum – Shaggyfruit pepperweed
Lepidium nitidum – Shining pepper grass
* *Sisymbrium altissimum* – Tumble mustard
* *Sisymbrium orientale* – Oriental hedge mustard
Stanleya pinnata var. *pinnata* – Desert prince's plume
Streptanthella longirostris – Long beaked twist flower
Thysanocarpus curvipes – Sand fringepod
Tropidocarpum gracile – Slender keel-fruit

CACTACEAE – Cactus family

Cylindropuntia echinocarpa - Silver cholla
Echinocactus polycephalus var. *polycephalus* – Cottontop cactus
Opuntia basilaris var. *basilaris* – Beavertail pricklypear
Sclerocactus polyancistrus – Mojave fishhook cactus

CAMPANULACEAE – Bellflower family

Nemacladus gracilis – slender nemacladus
Nemacladus orientalis – Eastern glandular nemacladus
Nemacladus rubescens – Desert nemacladus
Nemacladus sigmoideus – Small flowered nemacladus

CARYOPHYLLACEAE – Pink family

Loeflingia squarrosa – Spreading loeflingia
Sagina decumbens ssp. *occidentalis* – Western pearlwort
Spergularia astrosperma – Salt sand spurry
Spergularia marina – Sand spurry

CHENOPODIACEAE – Goosefoot family

Atriplex canescens – Fourwing saltbush
Atriplex confertifolia - Shadscale
Atriplex hymenalytra – Desert holly
Atriplex parryi – Parry's saltbush
Atriplex rosea - Redscale
Atriplex serenana var. *serenana* - Saltscale
Atriplex polycarpa – Allscale
* *Bassia hyssopifolia* – Fivehook bassia
Chenopodium leptophyllum – Thin leaved goosefoot
Grayia spinosa – Spiny hopsage
Krascheninnikovia lanata – Winterfat
Monolepis nuttaliana – Nuttall's povertyweed
* *Salsola paulsenii* – Paulsen's Russian thistle
* *Salsola tragus* – Russian thistle
Stutzia covillei – Coville's orach

CLEOMACEAE – Beeplant family

Peritoma arborea – Bladderpod

CONVOLVULACEAE – Morning-glory family

Cuscuta denticulata – Desert dodder

CUCURBITACEA – Gourd family

Cucurbita palmata – Coyote gourd

EUPHORBIACEAE - Spurge family

Croton setiger – Turkey mullein
Euphorbia albomarginata – Whitemargin sandmat
Euphorbia setiloba – Yuma sandmat
Euphorbia vallis-mortae – Death Valley sandmat
Stillingia paucidentata – Tooth leaf

FABACEAE – Legume family

Acmispon brachycarpus – Short podded lotus

Acmispon maritimus var. *brevivexillus* – Coastal lotus
Astragalus didymocarpus var. *dispermus* – Notch leaved locoweed
Astragalus lentiginosus var. *variabilis* – Freckled milkvetch
Astragalus pachypus – Thick pod milkvetch
Lupinus albifrons var. *albifrons* – Silver bush lupine
Lupinus concinnus – Bajada lupine
Lupinus excubitus var. *excubitus* – Grape lupine
Lupinus microcarpus var. *horizontalis* – chick lupine
Lupinus odoratus – Mojave lupine
Lupinus shockleyi – Shockley lupine
* *Medicago sativa* – Alfalfa
Prosopis glandulosa var. *torreyana* – Western honey mesquite
Psorothamnus arborescens – Mojave indigo bush
Psorothamnus arborescens var. *minutifolius* – Little leaved Mojave indigo bush, Johnson's indigo bush
Psorothamnus fremontii var. *fremontii* – Fremont's indigo bush
Senna armata – Desert senna

GERANIACEAE – Geranium family

* *Erodium cicutarium* – Redstem stork's bill
* *Erodium texanum* – Desert heron's bill

LAMIACEAE – Mint family

Salvia carduacea – Thistle sage
Salvia columbariae – Chia
Salvia dorrii var. *dorrii* – Dorr's sage
Scutellaria mexicana – Mexican bladder sage

LOASACEAE – Stickleaf family

Eucnide urens – Desert stingbush, desert rock nettle
Mentzelia affinis – Yellow comet
Mentzelia albicaulis – Whitestem blazingstar
Mentzelia eremophila – Pinyon blazing star, solitary blazing star
Mentzelia involucrata – Sand blazing star
Mentzelia nitens – Shining blazing star
Mentzelia tricuspis – Three-pointed blazing star
Mentzelia tridentata – Creamy blazing star
Petalonyx nitidus – Shinyleaf sandpaper plant
Petalonyx thurberi var. *thurberi* – Thurber's sandpaper plant

MALVACEAE – Mallow family

Eremalche exilis – White *mallow*

Eremalche rotundifolia – Desert fivespot
Sphaeralcea ambigua – Desert globemallow

MONTIACEAE – Montia family

Calandrinia menziesii – Redmaids
Calyptridium monandrum – Common pussypaws
Claytonia parviflora – Narrow leaved miner's lettuce

NYCTAGINACEAE – Four o'clock family

Abronia pogonantha – Mojave sand verbena
Mirabilis laevis var. *retrorsa* – Wishbone bush

ONAGRACEAE - Evening primrose family

Camissonia campestris ssp. *campestris* – Mojave suncup
Camissonia kernensis ssp. *gilmanii* – Gilman's evening primrose
Camissonia kernensis ssp. *kernensis* – Kern county evening primrose
Chylismia claviformis ssp. claviformis – Browneyes
Eremothera boothii – Booth's evening primrose
Eremothera boothii ssp. *desertorum* – Booth's desert primrose
Eremothera boothii ssp. *condensata* – Shredding suncup
Oenothera californica - California evening primrose
Oenothera cespitosa – Fragrant evening primrose
Oenothera deltoides – Desert lantern
Oenothera primiveris ssp. *bufonis* – Large yellow desert primrose
Tetrapteron palmeri – Palmer's sun cup

OROBANCHACEAE – Broomrape family

Castilleja chromosa – Desert paintbrush
Castilleja exserta ssp. *venusta* – Purple owl's clover

PAPAVERACEAE – Poppy family

Argemone munita – Prickly poppy
Eschscholzia californica – California poppy
Eschscholzia minutiflora ssp. *minutiflora* – Pygmy poppy
Eschscholzia minutiflora ssp. *covillei* – Coville's pygmy poppy
Eschscholzia minutiflora ssp. *twisselmannii* – Red rock poppy
Platystemon californicus – Cream cups

PHRYMACEAE - Lopseed family

Diplacus bigelovii – Bigelow monkeyflower
Erythranthe guttata – Yellow monkeyflower

Erythranthe rhodopetra – Red rock canyon monkeyflower
Erythranthe sierrae – Sierra Nevada monkeyflower
Mimulus palmeri – Palmer's monkeyflower

PLANTAGINACEAE – Plantain family

Mohavea breviflora – Golden desert snapdragon
Plantago ovata – Desert plantain

POLEMONIACEAE – Phlox family

Aliciella hutchinsifolia – Desert pale gilia
Aliciella latifolia – Broad leaf gilia
Aliciella leptomeria – Sand aliciella
Aliciella lottiae – Lott's gilia
Aliciella micromeria – Dainty gilia
Allophyllum gilioides ssp. *violaceum* – Dense false gillyflower
Eriastrum densifolium ssp. *densifolium* – Giant eriastrum
Eriastrum densifolium ssp. *mohavense* – Perennial wool star
Eriastrum diffusum – Miniature wool star
Eriastrum eremicum – Desert woolystar
Eriastrum pluriflorum – Many flowered eriastrum
Gilia aliquanta – Puff calyx gilia
Gilia brecciarum ssp. *neglecta* – Nevada gilia
Gilia cana ssp. *speciosa* – showy gilia
Gilia latiflora – Broad flowered gilia
Gilia malior – Scrub gilia
Gilia scopulorum – Rock gilia
Gilia sinuata – Cinder gilia
Gilia stellata – Star gilia
Leptosyphon aureus – Golden linanthus
Linanthus bigelovii – Bigelow's linanthus
Linanthus dichotomous – Evening snow
Linanthus filiformis – Yellow gilia
Linanthus parryae – Parry's linanthus, sandblossoms
Loeseliastrum matthewsii – Desert calico
Loeseliastum schottii – Schott gilia

POLYGONACEAE – Buckwheat family

Centrostegia thurberi – Red triangles
Chorizanthe brevicornu – Brittle spineflower
Chorizanthe rigida – Devil's spineflower
Chorizanthe spinosa – Mojave spineflower
Chorizanthe watsonii – Watson's spineflower

Eriogonum angulosum – Angled stem buckwheat
Eriogonum brachyanthum – Yellow buckwheat
Eriogonum brachypodium - Parry's buckwheat
Eriogonum deflexum var. *baratum* – Flatcrown buckwheat
Eriogonum fasciculatum var. *polifolium* – California buckwheat, Eastern Mojave buckwheat
Eriogonum gracillimum – Rose and white buckwheat
Eriogonum inflatum – Desert trumpet
Eriogonum maculatum – Angle stemmed buckwheat
Eriogonum mohavense – Western Mojave buckwheat
Eriogonum nidularium – Birdnest buckwheat
Eriogonum nudum var. *westonii* – Weston's buckwheat
Eriogonum ovalifolium – Oval leaved buckwheat
Eriogonum plumatella – Flat topped buckwheat
Eriogonum pusillum – Yellow turban
Eriogonum reniforme – Kidney leaf buckwheat
Eriogonum trichopes - Little desert buckwheat
Eriogonum viridescens – Bright green buckwheat, twotooth buckwheat
Mucronea perfoliata – Perfoliate spineflower
Oxytheca perfoliata – Roudleaf oxytheca
Rumex hymenosepalus – Wild rhubarb, canaigre

PTERIDACEAE – Maidenhair fern family

Myriopteris viscida - Viscid lace fern

RANUNCULACEAE – Buttercup family

Delphinium parishii ssp. *parishii* – Parish's larkspur, desert larkspur

ROSACEAE – Rose family

Coleogyne ramosissima – Black brush

SALICACEAE – Willow family

Populus fremontii – Fremont cottonwood
Salix laevigata – Red willow
Salix lasiolepis – Arroyo willow

SOLANACEAE – Nightshade family

Datura wrightii – Jimsonweed
Lycium andersonii – Anderson thornbush
Lycium cooperi – Cooper's box thorn, peach thorn

TAMARICACEAE – Tamarisk family

* *Tamarix aphylla* – Athel tamarisk
* *Tamarix parviflora* - Tamarisk
* *Tamarix ramosissima* - Tamarisk

ZYGOPHYLLACEAE – Caltrop family

Larrea tridentata – Creosote bush

C.2 GYMNOSPERMS AND GNETOPHYTES - VASCULAR SPECIES

EPHEDRACEAE – Jointfir family

Ephedra nevadensis – Nevada ephedra

C.3 MONOCOTS - VASCULAR SPECIES

AGAVACEAE – Agave family

Yucca brevifolia - Joshua tree

ALLIACEAE – Onion family

Allium fimbriatum var. *fimbriatu*m – Fringed onion
Allium fimbriatum var. *mohavense* - Mojave onion
Allium lacunosum var. *davisiae* – Davis' pitted onion

ARECACEAE – Palm family

Washingtonia robusta – Mexican fan palm

CYPERACEAE – Sedge family

Bolboschoenus maritimus – Alkali bulrush
Eleocharis parishii – Parish's spike rush
Schoenoplectus americanus – Chairmaker's bulrush
Schoenoplectus pungens var. *longispicatus* – Common threesquare

JUNCACEAE - Rush family

Juncus arcticus var. *balticus* – Baltic rush
Juncus bufonus var. *occidentalis* – Round fruited toad rush

JUNCAGINACEAE – Arrow grass family

Triglochin concinna var. *debilis* – Slender arrow grass

LILIACEAE – Lily family

Calochortus kennedyi var. *kennedyi* – Red mariposa lily
Calochortus striatus – Alkali mariposa lily

MELANTHIACEAE – Bunchflower family

Toxicoscordion brevibracteatus – Desert death camas

POACEAE – Grass family

* *Avena barbata* – Wild oats
Bromus arizonicus – Arizona brome
* *Bromus diandrus* – Ripgut brome
* *Bromus madritensis* – Compact brome, foxtail brome
* *Bromus rubens* - Red brome
* *Bromus tectorum* – Cheatgrass
* *Chloris virgata* – Silky grass
* *Cynodon dactylon* – Bermudagrass
Deschampsia danthanioides – Annual hairgrass
Distichlis spicata – Salt grass
Elymus elymoides var. *brevifolius* – Squirreltail
Festuca microstachys – Small fescue
Festuca octoflora – Sixweeks grass
Hordeum depressum – Alkali barley
* *Hordeum murinum* – Foxtail barley, mouse barley
* *Hordeum murinum* ssp. *glaucum* – Smooth barley
Melica imperfecta – Smallflower melicgrass
Muhlenbergia asperifolia – Scratch grass
Poa bigelovii – Bigelow's bluegrass
Poa fendleriana ssp. *longiligula* – Fendler's bluegrass
Poa secunda – Pine bluegrass
Poa secunda ssp. *secunda* – Sandberg's bluegrass
* *Polypogon monspeliensis* – Annual rabbitsfoot grass
* *Schismus arabicus* – Arabian schismus
* *Schismus barbatus* – Mediterranean grass
Sporobolus airoides – Alkali sacaton
Stipa hymenoides – Indian rice grass
Stipa speciosa – Desert needlegrass
* *Triticum aestivum* – Common wheat

THEMIDACEAE – Brodiaea family

Dipterosptemon capitatus – Blue dicks
Muilla coronata – Crowned muilla

TYPHACEAE – Cattail family

Typha domingensis – Southern cattail

* signifies introduced (non-native) species

Appendix D

TRAFFIC/ NOISE MODELING

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : 60478927 - Red Rock State Park GP Rev
Project Number : 60478927
Modeling Condition : Existing Traffic
Ground Type : Hard
K Factor : NA
Metric (L_{eq}, L_{dn}, CNEL) : Ldn
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Offset (dB)
1	State Route 14	Brandsburg Road	Reeman Junction	8100	50	100	82	4	14	87	0	13	

0

Traffic Noise Prediction Model, (FHWA RD-77-108)

Predicted Noise Levels

Project Name : 60478927 - Red Rock State Park GP Rev
Project Number : 60478927
Modeling Condition : Existing Traffic
Metric (Leq, Ldn, CNEL) : Ldn

Segment	Roadway	Segment From	Segment To	Noise Levels, dB Ldn Auto	MT	HT	Total	Distance to Traffic Noise Contours, Feet 70 dB	65 dB	60 dB	55 dB	50 dB
1	State Route 14	Brandsburg Road	Reeman Junction	63.5	58.1	67.7	69.4	88	278	878	2777	8780

Appendix E

NOTICE OF PREPARATION AND SCOPING SUMMARY

Notice of Preparation

State of California – The Resources Agency

DEPARTMENT OF PARKS AND RECREATION

Notice of Preparation of an Environmental Impact Report

Red Rock Canyon State Park General Plan Revision

Scoping Period: Tuesday, October 9, 2018 – Friday, November 9, 2018

DATE: October 9, 2018

TO: Agencies, Organizations, and Interested Parties

SUBJECT: Notice of Preparation of an Environmental Impact Report
Red Rock Canyon State Park General Plan Revision

LEAD AGENCY: California Department of Parks and Recreation

NOTICE IS HEREBY GIVEN that the California Department of Parks and Recreation (State Parks) intends to prepare an environmental impact report (EIR), consistent with requirements under the California Environmental Quality Act (CEQA). The purpose of the EIR is to evaluate the environmental impacts associated with the proposed Red Rock Canyon State Park General Plan Revision (Project). State Parks will serve as the lead agency under CEQA.

The purpose of this Notice of Preparation (NOP) is to notify agencies, organizations, and individuals that State Parks plans to prepare the EIR and request input on the scope of the environmental analysis. From public agencies, we are inviting comments on the scope and context of the environmental information that is relevant to each agency's statutory responsibilities with regard to the proposed Project. We are also requesting interested individuals' or organizations' views on the scope of the environmental document.

SCOPING PERIOD

Comments on the scope of the General Plan Revision will be accepted until 5:00 PM on Friday, November 9, 2018. Please submit comments to:

By Email: info@RedRockGP.com

By Mail: California Department of Parks and Recreation
Attn: Katie Metraux, Acting OHMVR Planning Manager
1725 23rd Street, Suite 200
Sacramento, CA 95816

Written and oral comments will also be accepted at two scoping meetings, at the dates and times listed below.

SCOPING/PLANNING MEETINGS

Dual-purpose public meetings for EIR scoping and General Plan Revision planning will be held at the following dates and locations:

Date: Tuesday, October 23, 2018
Location: Historical Society of the Upper Mojave Desert
Address: 230 W Ridgecrest Blvd, Ridgecrest, CA 93555
Time: 6:00 p.m. to 7:30 p.m.

Date: Wednesday, October 24, 2018
Location: University of Antelope Valley, Grand Ballroom
Address: 44055 N. Sierra Highway, Lancaster CA 93534
Time: 6:00 p.m. to 7:30 p.m.

These meetings will offer an opportunity for interested parties to meet the planning team and learn about the General Plan Revision. Attendees are encouraged to provide input about recreation opportunities and experiences, and goals and guidelines for park operations and programs. The meetings will also serve as scoping meetings for the EIR and attendees will have the opportunity to provide input on the scope and content of the EIR. The two meetings will be identical in format and content. Each meeting will begin with an open house from 6:00 p.m. to 6:30 p.m. The planning team will provide a brief presentation about the General Plan Revision and EIR at 6:30 p.m., followed by an opportunity for attendees to provide comments.

Interested parties are also encouraged to visit www.RedRockGP.com to view the NOP, learn more about the Project and to sign-up for the Project email list.

PROJECT TITLE

Red Rock Canyon State Park General Plan Revision

PROJECT LOCATION

Red Rock Canyon State Park is an approximately 27,000-acre area within the Mojave Sector of the Tehachapi District of the California State Park System. The Park is located along State Highway 14 in Kern County, approximately 25 miles northeast of Mojave and 80 miles east of Bakersfield (see attached Project Vicinity Map).

PROJECT BACKGROUND

In the late 1990s State Parks prepared an amendment to the Red Rock Canyon State Park's 1982 General Plan, due to the addition of newly-acquired lands, and especially those to be added to Red Rock Canyon State Park (RRCSP) as a result of the California Desert Protection Act of 1994. This amendment covered the Last Chance Canyon addition to the RRCSP, which was transferred from the United States Department of Interior – Bureau of Land Management (BLM) to State Parks in 1994. State Parks collected data, performed inventories and assessments, met with stakeholders, and held public meetings. However, the planning effort was suspended in 2003 due to budget constraints.

A second general plan revision was launched by State Parks in the fall of 2008. An NOP to initiate the CEQA review process was also issued at that time. The planning team held a scoping meeting and received extensive input from the public, agencies and stakeholders. This input informed and guided additional resource studies that have been conducted at the park since 2008 and was used to develop some initial planning concepts for potential park uses. This revision was suspended due to budgetary concerns.

Much has changed near Red Rock Canyon State Park since 2008, including land use designations, regional planning, and additional land acquisitions. State Parks has initiated planning for Onyx Ranch State Vehicular Recreation Area (SVRA) immediately adjacent to Red Rock Canyon State Park. There also have been several changes to the CEQA process. Therefore, State Parks has decided to issue a new NOP. The input received on the prior NOP and during prior planning meetings has been considered in the planning concepts developed to date.

PROJECT DESCRIPTION

Red Rock Canyon State Park provides magnificent views of the scenic Mohave desert landscape, including the spectacular rock formations for which the Park is named. The Park includes two natural preserves, and provides many recreation opportunities, including camping, touring, sightseeing, geology and nature studies, star gazing, exploration of historic sites, equestrian activities, hiking, and opportunities for reflection and solitude.

State Parks is developing a General Plan Revision for Red Rock Canyon State Park in accordance with Public Resources Code §5002.2 referencing General Plan guidelines and §21000 et seq. concerning the California Environmental Quality Act (CEQA). The purpose of the General Plan Revision is to provide a comprehensive framework for future Park development and use, and to provide management objectives for the Park. While the current General Plan (adopted in 1982) only covers the original 8,180-acres, the Revised General Plan will include the entire area of approximately 27,000 acres currently under park ownership and management. The Revised General Plan will also provide a clear framework of consistent management goals and guidelines for the entire Park, identify formal boundaries, and make recommendations for the classification of all of the Park's acreage. Preparation of the General Plan Revision will rely on existing information, including several recent studies at the park and in the surrounding areas. Based on the broad range of information available, and the prior planning efforts, State Parks has developed a series of proposed planning concepts to explore different management scenarios for the park and to solicit input from agencies and stakeholders. These proposed planning concepts will be available for viewing at the scoping/planning meetings and will form the basis for developing a preferred planning concept.

With the General Plan Revision, State Parks proposes to take the following actions for Red Rock Canyon State Park:

- Revise the 1982 General Plan to include a Statement of Management Intent for the entire Park which is consistent with the California Desert Protection Act, redefine the existing Declaration of Purpose for Red Rock Canyon State Park, and further define an appropriate purpose and vision for the transferred and acquired lands.
- Amend the Park boundaries to reflect land transfers and acquisitions that have occurred since adoption of the 1982 General Plan.
- Identify legal precedents and rights in connection with past and present land uses.
- Identify priorities for the protection of significant physical, cultural, aesthetic and natural resources. This may include recommendations for the designation or expansion of preserves or

special districts within the Park.

- Develop comprehensive management goals and guidelines for operation and management of the Park, consistent with the new Declaration of Purpose.
- Address issues related to staff and public safety associated with the remote location of the Park, mines, roads, and trails.
- Establish "Use Zones" and appropriate/allowable facilities and activities within each zone.
- Identify interpretive opportunities/themes to set the framework for the development of Park wide interpretive programs.
- Set the planning context for the park, including its proximity to the new Onyx Ranch SVRA and other surrounding land uses, and address common issues.

POTENTIAL ENVIRONMENTAL EFFECTS

State Parks has determined that the following topics will be included for evaluation in the EIR for the General Plan Revision: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, Tribal Cultural Resources, and Utilities and Service Systems.

By establishing "Use Zones" and classification, determining appropriate uses, and developing a comprehensive set of goals and guidelines, the Revised General Plan will identify measures to avoid and minimize potential impacts of future projects and activities that will be allowed under the Plan. Thus, the General Plan is expected to be largely self-mitigating.

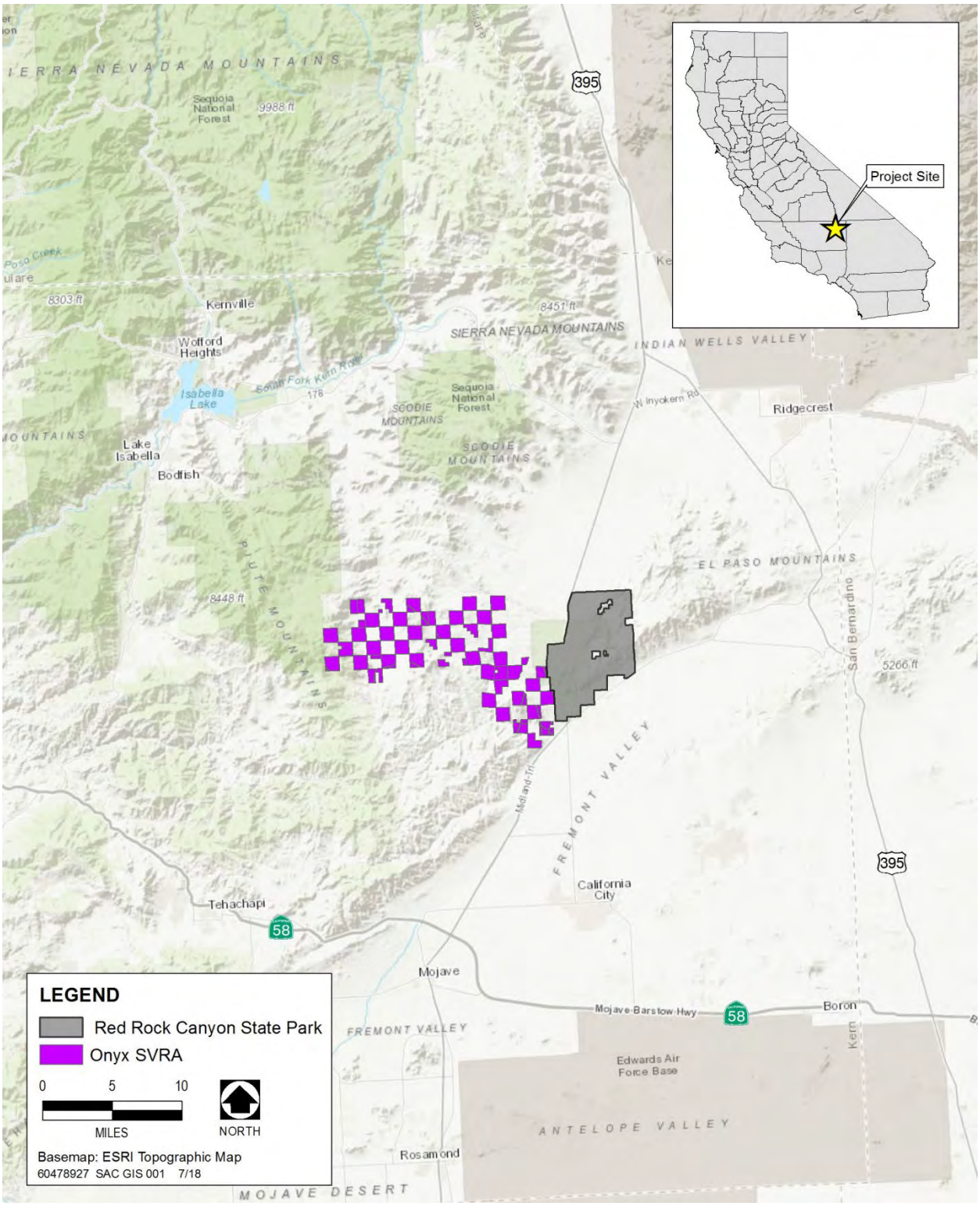
INTENDED USE OF THE EIR

State Parks will use the EIR to consider the environmental effects of the General Plan Revision and if necessary, develop mitigation measures to reduce potential impacts resulting from General Plan implementation. State Parks will also consider a reasonable range of alternatives when reviewing the General Plan Revision for approval. The EIR will serve as the CEQA compliance document for adoption of the General Plan and will be certified by the lead agency (State Parks) concurrent with General Plan Revision approval.

CEQA permits the use of a tiered process for environmental review. The first tier is a program-level analysis which comprehensively reviews the environmental impacts of a program as a whole at a broad conceptual level of analysis including cumulative impacts. Once certified, the EIR will serve as the programmatic environmental document to be referenced for implementation of future actions included in the General Plan Revision. It will serve as a first-tier document for the General Plan.

Future implementation actions envisioned in the General Plan Revision that are found entirely within the scope of the EIR may not require additional environmental review. Those that do require additional review under CEQA may be able to use a streamlined or focused approach to CEQA compliance.

PROJECT VICINITY MAP



Scoping Summary

State of California • Natural Resources Agency
Gavin Newsom, *Governor*
DEPARTMENT OF PARKS AND RECREATION
Lisa Ann L. Mangat, *Director*
P.O. Box 942896 • Sacramento, CA 94296-0001
Strategic Planning and Recreation Services Division, 1725 23rd Street Suite 200, Sacramento, CA 95816

Summary of Comments Received in Response to Notice of Preparation for the Red Rock Canyon State Park General Plan Revision (October 2018)

The California Department of Parks and Recreation (State Parks), serving as the lead agency under the California Environmental Quality Act (CEQA) for the Red Rock Canyon State Park General Plan Revision project, issued a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the project on October 9, 2018. The issuance of the NOP initiated the environmental scoping period for the project, which began on Tuesday, October 9, 2018 and ended on Friday, November 9, 2018. The NOP is included in Attachment A.

Scoping Outreach

The release of the NOP was publicized in the Antelope Valley Press and Bakersfield Californian newspapers immediately following the release of the NOP. Newspaper postings included a summary of the project and the NOP, information on the two upcoming scoping meetings, and information on how to provide comments.

The NOP, scoping meetings, and instructions on how to provide comments were also posted to the project website at www.redrockgp.com; sent out in an email blast; and mailed to relevant public agencies, nearby jurisdictions, tribes, local organizations, and other stakeholders.

Scoping Meetings

Two public scoping meetings were held for the project on the evening of October 23, 2018 at the Historical Society of the Upper Mojave Desert in Ridgecrest, and on the evening of October 24, 2018 at the University of Antelope Valley in Lancaster. Approximately 24 people attended the scoping meeting in Ridgecrest and approximately 28 people attended the scoping meeting in Lancaster.

Scoping Comments

Between October 9 and November 9, 2018, 50 written comments were received from public agencies, local organizations, and individuals. In addition, approximately 2,460 comments from the Center for Biological Diversity were emailed via a pre-written template to the project inbox advocating for the protection and conservation of biodiversity and natural resources in the park.

The following is a summary of the key issues raised during the scoping period intended to summarize the major concerns raised in comment in regards to the scope and content of the EIR. Copies of all written comments received at the scoping meetings, by USPS mail, and by email were reviewed by the planning team in preparation of this summary.

Summary of Key Issues Raised

Facilities

- Don't add additional fencing
- Consider alternatives to fencing around park boundaries for aesthetics purposes
- Concerns regarding toilets and water access not always working
- Improve existing facilities and roads in the park
- Provide improved water source on the east side of the park
- Issues regarding overcrowding and maintenance improvements needed at Ricardo campground, including repaired water spigot, bathroom facility
- Provide resources for education about falcons and falconers in the park
- Develop a water source near Red Cliff trailhead for humans and animals
- Incorporate new educational and interpretive opportunities and new technologies into the General Plan

Camping

- Introduce more camping areas generally
- Introduce camping along Inyokern Road
- Consider the possibility of creating an equestrian campground at or near Ricardo campground
- Address the status of the equestrian campground at the Barnett Opal Mine area
- Consider opening a staging area of improved campground along the Burro Schmidt Tunnel Road

Hiking and Equestrian

- Ensure there are sufficient trails for hiking and dark sky experiences
- Designate and provide more hiker and equestrian-only trails
- Increase non-motorized hiking trails throughout the park
- Allow hiking off defined trails
- Open Nightmare Gulch for hiking and horseback riding

Park Purpose

- Primary purpose of the park should be for scientific study of plants and conservation of biodiversity
- Update the Declaration of Purpose of Red Rock Canyon State Park to include all resources occurring within the park
- Include a clear and detailed description of the purpose, goals, and objectives for the project in the EIR

Off-Highway Vehicle Use

- Open more trails for OHV use
- Open OHV access to Dove Springs
- Reopen Nightmare Gulch for OHV use
- Preserve historic OHV routes for future generations of motorized users and the disabled
- Motorized vehicle use should be reduced overall
- Limit OHV use to designated routes
- OHV use should be eliminated completely
- Include an analysis in the EIR of effectiveness of administrative controls in managing OHV and OHV impacts
- Prioritize closure of OHV routes in riparian zones

- Only allow vehicles and bicycles on clearly defined trails
- Take into consideration the technical advances in OHVs, increase of OHV use, and increased popularity of extreme sports since the time that the General Plan was written in 1981

Biological Resources

- Resource element should be the first element of the General Plan to protect biodiversity
- Prepare the Resource element of the General Plan first for public review
- Close Last Chance Canyon and Nightmare Gulch for wildlife protection
- Protect plant species unique to the Park such as Red Rock Canyon tarplant, monkeyflower
- Address climate change as an environmental impact in the General Plan Revision
- Provide a buffer to protect the park from external threats
- Address cumulative impacts to the Desert tortoise
- Provide a corridor or network to link together Desert tortoise habitat
- Particular areas in need of protection are Nightmare Gulch, Birds of Prey nesting area, Red Buttes, riparian area around Cudahy Camp
- Limit visitor use including sightseeing, nature observation, research and study, hiking, photography, and painting and sketching
- Include an inventory of natural and cultural resources in the General Plan
- Use the Desert Renewable Energy Conservation Plan to assemble the Resource element
- Include information from the 2008 paper *Status of the Desert Tortoise in Red Rock Canyon State Park* published by California Fish and Game in the Resource element
- Include analysis of direct, indirect, and cumulative impacts of the proposed project to threatened, endangered, and sensitive species and unique plant communities in the EIR
- Include a quantitative data-based analysis of direct impacts of loss of habitat from motorized vehicle use and the indirect impacts from pollution, noise, fire, and non-native species from motorized vehicles in the EIR
- Include an analysis of impacts to rare, sensitive and species of concern
- Define the environmental baseline in the EIR that accounts for recreational trends and population growth
- The EIR should analyze impacts and adopt mitigations measures related to greenhouse gas emissions and global warming
- Rare plants and sensitive natural communities should be protected as defined by the California Rare Plant Bank
- Include measures in the General Plan to address invasive plant species
- Analyze threats and effects that roads and disturbances have on the ability of the round-tailed ground squirrel to expand into Mohave ground squirrel habitat

Cultural Resources

- Protect areas of the park with valuable archaeological resources, cultural sites for Native American tribes
- Designate Iron Canyon as a cultural preserve
- Recognize the significance of geologic and paleontological resources of the park

- Ensure compliance with AB 52 and SB 18 when consulting with Native American tribes, perform a Sacred Lands File search with the NAHC
- Designate a preserve for cultural and natural resources in the upper Last Chance Canyon area including Red Buttes

Land Use and Land Use Planning

- Address cattle grazing drift from adjacent lands in the park
- Coordinate with Bureau of Land Management to ensure land use compatibility and restriction of motorized vehicle use, firearm use, grazing, mining, and communication utilities within ½ mile of the RRCSP boundary

Recreation

- Include consideration of recreational needs and alternatives that minimize user conflicts in the EIR

Transportation

- Ensure Caltrans can perform essential facility maintenance such as flood control outside of SR 14 right-of-way when designating preserves or special districts
- Consult Caltrans for additional facilities and recreational activities to coordinate regarding potential changes to traffic patterns and signage needs
- Install traffic counters at the entrances of the park to be able to understand how to address issues of dust, vegetation, and noise
- Consider impacts to rail crossing safety and increases in pedestrian traffic and trespassing onto railroad right-of-way
- Ensure drainage does not shift storm water drainage toward Union Pacific property and infrastructure

Safety and Security

- Firearms should be prohibited
- Address illegal use of firearms in the park
- Public safety concerns regarding mapping of trails, signage
- Provide safe passing areas of fencing
- Increase Parks staff throughout the park on weekends
- Include a provision for adequate law enforcement and staff in the General Plan
- Improve maintenance of camping areas and hiking trails; increase designated camping sites

Rock Hounding

- Allow rock hounding in the RRCSP and provide provisions for rock hounding in the management plan for Onyx Ranch

Outreach

- Introduce coordination with non-profits to assist with the management of the park
- Include outreach to California City, Kern County Board of Supervisors, Kern County Planning, City of Ridgecrest, and the Bureau of Land Management during the planning process
- The OHV Commission should have an opportunity to give input to the plan and provide comments