Red Rock Canyon State Park

This is a brief summary of the Biological Resources Report for Red Rock Canyon State Park (RRCSP). The full report will become part of the Preliminary General Plan and Draft Environmental Impact Report.

Project Background
The Biological Resources Report was prepared to compile, synthesize, and update the biological resource information in Red Rock Canyon State Park and integrates information from federal, state, and regional sources with data from numerous Park-specific studies and observations, including surveys conducted during 2018 and 2019 to complement the biological resources baseline for the Park.

Additional surveys will be conducted for project-level work once the general plan is approved and the environmental impact report is certified. As Nightmare Gulch, Red Buttes, and Black Rock Canyon were found to be abundant in natural resources, the planning team proposed natural preserves and sensitive resource management zones to protect resources there.

Regional Planning and Regulatory Context
The RRCSP planning area is situated within a network of federal and state lands with multiple land management directives. California State Parks and the Bureau of Land Management (BLM) collaborate on regional planning and resource protection to provide consistent land management direction when possible. Most BLM lands surrounding the Park are designated as Areas of Critical Environmental Concern (ACECs) – 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.

Summary of Findings

Special-Status Resources

Wetlands and Waters
Wetlands and waters are critical features for wildlife in arid, desert landscapes, which include riparian (streamside) communities. The Park supports approximately 673 acres of riparian communities and two acres of wetland communities that provide important habitat for resident and migratory wildlife species.

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. Additionally, this community (and
the species itself) is of increasing conservation interest due to observed range contractions. The Park is near the western edge of the species’ range, which is considered at a very high risk and likely unsustainable.

**Other Sensitive Vegetation Communities**

The Park supports 19 vegetation communities/land cover types of which five are considered sensitive. These communities account for approximately five percent of the overall Park acreage and include multiple desert scrub (875 acres), and riparian (537 acres) communities.

**Sensitive Species**

No federally listed plant species are known to occur or potentially occur within the Park. Additionally, no state-listed endangered or threatened plants occur in RRCSP. The park has one state listed rare species, red rock tarplant (*Deinandra arida*), as well as numerous CRPR species that have been documented in multiple locations throughout the park. Some of these will be noted in the following sections. The following federally and state listed wildlife species occur or potentially occur within the Park:

**Desert Tortoise**

The Mojave population of desert tortoise (*Gopherus agassizii*) is federally and state listed as threatened. While no US Fish and Wildlife Service (USFW)-designated critical habitat is located within the park, RRCSP is three miles west of designated critical habitat and the BLM Desert Tortoise Research Natural Area is located just south of Koehn Lake approximately four miles from RRCSP. Nearly the entire Park, with the exception of the El Paso Mountain Range, is modeled as suitable for desert tortoise, and the total RRCSP desert tortoise population has been estimated at approximately 108 individuals.

**Tricolored Blackbird**

Tricolored blackbird (*Agelaius tricolor*) is a resident songbird and is state-listed as threatened. While there are no records of tricolored blackbird occur in the Park, a tricolored blackbird breeding colony and occurrence records less than 2 miles southwest of the Park suggests that this species has the potential to occur in or migrate through RRCSP.

**Willow Flycatcher**

RRCSP is situated at the boundary between the breeding ranges for southwestern willow flycatcher (*Empidonax traillii extimus*) and little willow flycatcher (*Empidonax traillii brewsteri*). The southwestern willow flycatcher is federally listed as endangered and willow flycatcher (regardless of subspecies) is state-listed as endangered in California.
**Mohave Ground Squirrel**

The Mohave ground squirrel (*Xerospermophilus mohavensis*) is a state threatened species that occurs entirely within the western Mojave Desert of California. Nearly the entire Park is modeled as suitable for Mohave ground squirrel, and all areas of the Park would generally be considered suitable habitat 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**

**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. RRCSP and the surrounding lands are important areas for golden eagle nesting and foraging. The park’s areas of steep rock outcrops and cliff faces support and have historically supported nesting golden eagles and serve as excellent nesting habitat.

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*). Prairie falcons are a USFWS bird of conservation concern. The burrowing owl is a California species of special concern and a USFWS bird of conservation concern and multiple records of the species have been noted near 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*).

**Desert Scrub Birds**

A variety of desert scrub bird species of interest occur or have the potential to occur in the Park, including but not limited to loggerhead shrike (*Lanius ludovicianus*), California species of special concern and a USFWS bird of conservation concern; Bendire’s thrasher (*Toxostoma bendirei*), a California species of special concern and a USFWS bird of conservation concern; Crissal thrasher (*Toxostoma crissale*), a California species of special concern; LeConte’s thrasher (*Toxostoma lecontei*), a California species of special concern and USFWS bird of conservation concern; and, Brewer’s sparrow (*Spizella breweri*), a USFWS bird of conservation concern.

**Migratory Birds, Bats, and Small Mammals**

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 migrations to and from wintering and breeding grounds. RRCSP’s abundance of caves, steep cliffs, and rock outcrops and potential water sources provide roosting and foraging habitats for a variety of bat species of interest, and desert scrub, sagebrush, desert wash and Joshua tree woodland habitats all could support small mammals such as the Tulare grasshopper mouse and yellow-eared pocket mouse, though limited research and data are available. The desert kit fox
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*Vulpes macrotis arsipus* is a mammal species of increasing conservation interest that has the potential to occur within and around RRCSP since their range extends throughout both the Mojave and Sonoran deserts.

**Areas of Special Natural Management Concern**

**Nightmare Gulch**

Numerous rare plants have been observed within the Nightmare Gulch area. These plants are listed in Table 1 by their plant name and California Rare Plant Ranking (CRPR).

*Table 1. Nightmare Gulch Rare Plant Ranked Species*

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>CRP Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Rock tarplant (<em>Deinandra arida</em>)</td>
<td>1B.2 Rare</td>
</tr>
<tr>
<td>Red Rock Canyon monkeyflower (<em>Erythranthe rhodopetra</em>)</td>
<td>1B.1</td>
</tr>
<tr>
<td>Red rock poppy (<em>Eschscholzia minutiflora ssp. twisselmannii</em>)</td>
<td>1B.2</td>
</tr>
<tr>
<td>Solitary blazing star (<em>Mentzelia eremophila</em>)</td>
<td>4.2</td>
</tr>
<tr>
<td>Crowned muilla (<em>Muilla coronata</em>)</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Nightmare Gulch further provides significant wildlife habitat. While recent surveys detected no live desert tortoises, evidence was found in at least a dozen locations in the area, primarily in the desert scrub above the canyon bottom.

The cliffs above Nightmare Gulch are one of four locations in the park where Golden Eagles (*Aquila chrysaetos*) have been recorded, and where there is significant evidence of other nesting raptors such as red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*).

**Last Chance Canyon**

Numerous rare plants have been observed within the Last Chance Canyon area. These plants are listed in Table 2 by their plant name and CRP Ranking. It should be noted that many of these recordings, particularly in recent surveys, have occurred along canyon walls or in side canyons or washes away from canyon bottoms that are subject to regular disturbance.

*Table 2 Last Chance Canyon Rare Plant Species*

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>CRP Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Rock tarplant (<em>Deinandra arida</em>)</td>
<td>1B.2 Rare</td>
</tr>
<tr>
<td>Lemmon’s jewelflower (<em>Caulanthus lemmonii</em>)</td>
<td>1B.2</td>
</tr>
<tr>
<td>Red Rock Canyon monkeyflower (<em>Erythranthe rhodopetra</em>)</td>
<td>1B.1</td>
</tr>
<tr>
<td>Red Rock poppy (<em>Eschscholzia minutiflora ssp. twisselmannii</em>)</td>
<td>1B.2</td>
</tr>
<tr>
<td>Charlotte’s phacelia (<em>Phacelia nashiana</em>)</td>
<td>1B.2</td>
</tr>
<tr>
<td>Creamy blazing star (<em>Mentzelia tridentata</em>)</td>
<td>1B.2</td>
</tr>
<tr>
<td>Solitary blazing star (<em>Mentzelia eremophila</em>)</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Recent surveys have not recorded detections of the park’s rare wildlife in Last Chance Canyon. However, during the 2018 field reconnaissance, a willow flycatcher was detected in the riparian habitat in Last Chance Canyon near Cudahy Camp. Based on all available information, it likely uses the Park for foraging and stopovers during annual northward and southward migration.

**Northwest RRCSP/Sierra View Road**

The northwest portion of the park is habitat for the desert tortoise (*Gopherus agassizii*) and Mojave ground squirrel (*Xerospermophilus mohavensis*). In 2002 through 2004, the USGS surveyed the western portion of the Park for desert tortoise and found evidence of tortoise population decline in the Park. Trapping surveys across multiple years have detected Mojave ground squirrel at multiple locations in the northwest area of the park.