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Via email only

24 April 2019

California Department of Parks and Recreation
Attn: Katie Metraux, Planning Manager
1725 23rd Street, Suite 200
Sacramento, CA 95816, info@redrockgp.com

RE: Red Rock Canyon State Park General Plan Concepts

Dear Ms. Metraux,

The Desert Tortoise Council (Council) is a non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council routinely provides information and other forms of assistance to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges.

We appreciate this opportunity to provide comments on the above-referenced project. Given the location of the proposed project in habitats occupied by Agassiz's desert tortoise (*Gopherus agassizii*) (synonymous with "Mojave desert tortoise"), our comments pertain to enhancing protection by revising the General Plan for Red Rock Canyon State Park (State Park) to facilitate the conservation and recovery of Agassiz's desert tortoise. We were able to attend the public meeting in Ridgecrest, CA on 27 March 2019 and asked various questions of the State Park staff in attendance. Herein, we will provide answers to the four questions identified on the comment card distributed to the public during that event and identify a few other issues that need to be considered in the planning process.

1. It is our understanding that Red Rock Canyon was established as a State Park in 1968, that the existing General Plan was completed in 1982, and that, with the passage of the Desert Protection Act in 1994, the park boundaries were significantly enlarged. Under the current concepts approach by California Department of Parks and Recreation (State Parks), Concepts 1 and 2 would result in changing Red Rock Canyon from a State Park to a State Recreational Area (SRA) and Concepts 3 and 4 would retain it as a State Park. The Council strongly recommends that Red Rock Canyon remain as a State Park and strongly oppose it becoming a SRA for the reasons that follow.

2. We understand that California Public Resources Code Section 5019.56 (a) states, in part, State Recreation Areas "…shall be selected for their having terrain capable of withstanding extensive human impact and for their proximity to large population centers, major routes of travel, or proven recreational resources such as manmade or natural bodies of water." When we asked State Park staff at the public meeting, they were not aware of any SRAs in the California deserts; Silverwood Lake located south of Hesperia was the only SRA identified, it is not in desert habitats, and is valued for recreation by water sports enthusiasts.

3. Since there are no SRAs in the California deserts, we conclude that there are no studies, standards, or precedents that State Parks staff has to objectively determine if Red Rock Canyon terrains can withstand "…extensive human impact…" within the existing State Park. We are also concerned that changing the State Park designation to a "State Recreational Area" will be perceived by the public as another focal opportunity to practice off-highway recreational vehicle (OHV) activities within Red Rock Canyon. For these reasons, we believe it should remain as a State Park. We believe that implementing OHV management in Red Rock Canyon as an SRA will become a difficult if not unattainable action by State Parks.

4. We understand that the adjacent Onyx State Vehicle Recreational Area (Onyx SVRA) was established in 2015 and is now managed by the Off-Highway Motor Vehicle Recreation Division of State Parks (OHMVR). In contrast, if Red Rock Canyon is redesignated as a SRA, it would still be managed by State Parks, not the OHMVR Division. Please be sure that the Environmental Impact Report (EIR) that will serve as Chapter 5 of the revised General Plan clearly defines the roles of these two different management entities within the State Parks management structure if Red Rock Canyon is (a) maintained as a State Park (our strong preference) or (b) reclassified as a SRA (which we strongly oppose).

5. Given the establishment of the Onyx SVRA three years ago, we ask that the EIR document monitoring activities conducted by OHMVR Division in the Affected Environments analysis of the EIR. From the State Parks website, we note that "Off-Highway Motor Vehicle Recreation (OHMVR) Division states it will ensure that quality recreational opportunities remain available for future generations by providing for education, conservation, and enforcement efforts that balance OHV recreation impact with programs that conserve and protect cultural and natural resources. California State Parks OHMVR Division (Division) plays an important role in protecting diverse natural and cultural resources throughout the State. Providing long-term, sustained off-highway vehicle (OHV) recreation opportunities is a top priority in the OHMVR Division. The condition of soils, wildlife, and vegetative resources are continually monitored at all State Vehicular Recreation Areas (SVRA) to determine if soil loss standards and wildlife habitat protection programs are consistent with the goals of the Off-Highway Motor Vehicle program" (California Department of Parks and Recreation 2019).

We presume that for OHMVR Division to comply with the California Public Resources Code and its requirements as described on its website, that it designed and implemented baseline studies to collect data on the existing conditions subsequent to opening the Onyx SVRA to the public? Please provide this information on the four-plus years of monitoring at the Onyx SVRA and how these results may directly, indirectly, and cumulatively affect nearby Red Rock Canyon.

Some questions to be considered by State Parks when making its decision regarding the future designation of Red Rock Canyon State Park are: Has establishment of the adjacent Onyx SVRA resulted in increased vehicle impacts in the State Park with respect to soils, native vegetation quality and quantity, air quality, cultural resources, environmental contaminants, etc? How have habitats of listed species, including desert tortoise and Mohave ground squirrel (*Xerospermophilus mohavensis*) been affected by establishment of this new SVRA? How is OHMVR Division monitoring impacts to these State and federally-threatened species within the Onyx SVRA? Have these data shown that Red Rock Canyon is "…capable of withstanding extensive human impact…?"

6. If the State Park is redesignated as a SRA, we believe that State Parks should obtain an incidental take permit from the U.S. Fish and Wildlife Service (USFWS) under Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA), as that action would likely result in the increased likelihood of incidental take by facilitating increased recreational vehicle activity in tortoise habitats that are relatively more protected as a State Park than they would be as a SRA.

7. Similarly, State Parks should consult with California Department of Fish and Wildlife (CDFW) to see if a Section 2081 incidental take permit will be required for management decisions that authorize activities that are likely to result in incidental take of both the desert tortoise and Mohave ground squirrel. Has State Parks received incidental take permits from the USFWS and CDFW for the incidental take of these two listed species at the Onyx SVRA?

8. We were told at the public meeting that the current Land Use Policy does not allow green sticker use on routes in State Parks. Hence, there are only two green sticker routes in Concept 3 and none in Concept 4, which are the two alternatives that maintain Red Rock Canyon as a State Park. Given the proximity of the State Park to the City of Ridgecrest and the prevalence of off-highway vehicle recreation in the area, we believe that planners have created a scenario where the local public will only support re-designation of the State Park to a SRA. The EIR must clearly explain how green sticker routes are in violation of the Land Use Policy. We believe that maintaining Red Rock Canyon as a State Park with current or reduced levels of green sticker use is a better alternative than re-designating the area as a SRA.

9. We believe that an objective cumulative effects analysis in the revised General Plan EIR is essential. Both the adjacent Dove Springs and Jawbone BLM open areas and nearby Spangler Hills Open Area were established with passage of the California Desert Conservation Area Plan (BLM 1980). As mentioned above, the adjacent Onyx SVRA was established in 2015. The Desert Renewable Energy Conservation Plan (DRECP) established several million acres of Special Recreation Management Areas (SRMAs) and Enhanced Recreation Management Areas (ERMAs) throughout California Deserts in 2016 (BLM 2016), many of which were designated as desert tortoise critical habitat in 1994 (USFWS 1994). Last year, BLM proposed to allow unrestricted off-highway vehicle use on two dry lakes in desert tortoise critical habitats, including the nearby Cuddeback Lake (BLM 2018). Given these extensive recreational vehicle opportunities, we strongly oppose creating a new SRA on lands that have been and should continue to be managed as a State Park.

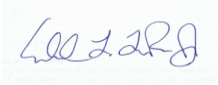
10. In addition to the numerous recreational vehicle free-play areas identified above, the cumulative effects analysis of the EIR should also document the extensive amount of desert tortoise habitats that are being converted to solar development within 20 to 30 miles of Red Rock Canyon. Five or six, multi-thousand-acre solar facilities have been developed south of Red Rock Canyon in the last five years creating potential connectivity issues for the tortoise and Mohave ground squirrel. We believe under current management, that Red Rock Canyon State Park and the nearby Desert Tortoise Research Natural Area (DTRNA) are even more important to tortoise conservation and recovery along the western boundary of the tortoise's range because of expanding recreational activity opportunities and extensive solar development in the region in just the past five years. For these reasons, Red Rock Canyon should not be designated as a SRA.

11. The EIR should include the latest available data on the declines of the desert tortoise in the West Mojave and throughout the range of the listed Mojave Population. Rather than include the extensive information and data that are available within the body of this letter, we have attached Appendix A for your use in documenting the declines in tortoises. It is our contention that changing Red Rock Canyon from a State Park to a SRA will contribute to the documented ongoing decline of tortoises in the West Mojave currently below the viable density and will result in damage of occupied and suitable tortoise habitats.

In conclusion, we recognize that State Parks is in a difficult position where elimination of green sticker routes from the Red Rock Canyon State Park appears to be the only way its State Park status can be maintained to be consistent with current Land Use Policy, and for the reasons given herein, we think converting it to a SRA is a serious mistake. The general public from throughout the State, and particularly our members who visit Red Rock Canyon State Park are likely to support the removal of green sticker routes. Given ubiquitous impacts to the desert tortoise and its habitats from existing and recently proposed heightened levels of recreation, it is essential that Red Rock Canyon continue to be managed as a State Park, not another OHV recreational area.

We appreciate this opportunity to provide input and trust that our comments will further protect tortoises during development of the revised general plan. Herein, we ask that the Desert Tortoise Council be identified as an Affected Interest for this and all other State Parks projects that may affect desert tortoises in California, and that the draft EIR for this particular project be provided to us at the contact information listed above.

Regards,



Edward L. LaRue, Jr., M.S.
Desert Tortoise Council, Ecosystems Advisory Committee, Chairperson

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Appendix A. Status and Trend of the Mojave Desert Tortoise from 2004 through 2014

Density of the Populations of Adult Mojave Desert Tortoises

The USFWS reported the following changes to the populations of adult Mojave desert tortoises in recovery units and critical habitat units/tortoise conservation areas (CHUs/TCAs) from 2004 to 2014 (Table 1; USFWS 2015). There are 17 populations of Mojave desert tortoise described below that occur in the CHUs and TCAs; 14 are on lands managed by the BLM; 8 of these are in the California Desert Conservation Area.

Table 1. Summary of 10-year trend data for 5 Recovery Units and 17 CHUs/TCAs for Agassiz's desert tortoise (= Mojave desert tortoise). The table includes the area of each Recovery Unit and CHU/TCA, percent of total habitat for each Recovery Unit and CHU/TCA, density (number of breeding adults/km^2 and standard errors = SE), and the percent change in population density between 2004 and 2014. Populations below the viable level of 3.9 breeding individuals/km^2 (10 breeding individuals per mi^2) (assumes a 1:1 sex ratio) and showing a decline from 2004 to 2014 are in red.

Recovery Unit: Designated Critical Habitat Unit/Tortoise Conservation Area	**Surveyed area (km^2)**	**% of total habitat area in Recovery Unit & CHU/TCA**	**2014 density/km^2 (SE)**	**% 10-year change (2004–2014)**
Western Mojave, CA	**6,294**	**24.51**	**2.8 (1.0)**	**–50.7 decline**
Fremont-Kramer	2,347	9.14	2.6 (1.0)	–50.6 decline
Ord-Rodman	852	3.32	3.6 (1.4)	–56.5 decline
Superior-Cronese	3,094	12.05	2.4 (0.9)	–61.5 decline
Colorado Desert, CA	**11,663**	**45.42**	**4.0 (1.4)**	**–36.25 decline**
Chocolate Mtn AGR, CA	713	2.78	7.2 (2.8)	–29.77 decline
Chuckwalla, CA	2,818	10.97	3.3 (1.3)	–37.43 decline
Chemehuevi, CA	3,763	14.65	2.8 (1.1)	–64.70 decline
Fenner, CA	1,782	6.94	4.8 (1.9)	–52.86 decline
Joshua Tree, CA	1,152	4.49	3.7 (1.5)	+178.62 increase
Pinto Mtn, CA	508	1.98	2.4 (1.0)	–60.30 decline
Piute Valley, NV	927	3.61	5.3 (2.1)	+162.36 increase
Northeastern Mojave	**4,160**	**16.2**	**4.5 (1.9)**	**+325.62 increase**
Beaver Dam Slope, NV, UT, AZ	750	2.92	6.2 (2.4)	+370.33 increase
Coyote Spring, NV	960	3.74	4.0 (1.6)	+ 265.06 increase
Gold Butte, NV & AZ	1,607	6.26	2.7 (1.0)	+ 384.37 increase
Mormon Mesa, NV	844	3.29	6.4 (2.5)	+ 217.80 increase
Eastern Mojave, NV & CA	**3,446**	**13.42**	**1.9 (0.7)**	**–67.26 decline**
El Dorado Valley, NV	999	3.89	1.5 (0.6)	–61.14 decline
Ivanpah Valley, CA	2,447	9.53	2.3 (0.9)	–56.05 decline
Upper Virgin River	**115**	**0.45**	**15.3 (6.0)**	**–26.57 decline**
Red Cliffs Desert	115	0.45	15.3 (6.0)	–26.57 decline
Range-wide Area of CHUs - TCAs/Range-wide Change in Population Status	**25,678**	**100.00**		**–32.18 decline**

Important points from this table include:

1. Change in Density for the Mojave Desert Tortoise Range-wide (Adults)

- Eleven of 17 populations of the Mojave desert tortoise declined from 2004 to 2014.
- Ten of 17 populations of the Mojave desert tortoise are below the viability threshold calculated in 1994 (USFWS 1994a). These 10 populations represent 89.7 percent of the range-wide habitat in CHUs/TCAs. The viability threshold or tortoise density would likely be greater than in 1994 (3.9 breeding individuals/km^2 (10 breeding individuals per mi^2)) because of declines in habitat quantity, habitat quality, connectivity, recruitment, and other factors considered in calculating population viability.

2. Change in Density for the Mojave Desert Tortoise in California (Adults)

- Nine of 10 populations of the Mojave desert tortoise in California declined from 29 to 64 percent from 2004 to 2014 with implementation of tortoise conservation measures in the BLM's Northern and Eastern Colorado Desert Coordinated Management Plan, Northern and Eastern Mojave Desert Management Plan, and West Mojave Plan.
- Eight of 10 populations of the Mojave desert tortoise in California are no longer viable. These eight populations represent 87.45 percent of the habitat in California that is in CHU/TCAs.
- The two viable population of the Mojave desert tortoise in California are declining. If their rates of decline from 2004 to 2014 continue, these two populations will no longer be viable in about 2020 and 2031.

3. Change in Density for the Mojave Desert Tortoise on BLM Land in California (Adults)

- Eight of eight populations of Mojave desert tortoise on lands managed by the BLM in California declined from 2004 to 2014.
- Seven of eight populations of Mojave desert tortoise on lands managed by the BLM in California are below the viability threshold.

4. Change in Density for Mojave Desert Tortoise Populations in California that Are Moving toward Meeting Recovery Criteria (Adults)

- The only population of Mojave desert tortoise in California that is not declining is on land managed by the National Park Service. It increased 178 percent in 10 years.

Declining densities of adult tortoises from 2004 to 2014 have left the Western Mojave adult numbers at 49% (a 51% decline), Colorado Desert at 64 % (a 36% decline), and Eastern Mojave at 33% (a 67% decline) of their 2004 levels (Allison and McLuckie 2018, USFWS 2015). Such steep declines in the density of adults are only sustainable if there were suitably large improvements in reproduction and juvenile growth and survival. However, the proportion of juveniles has not increased anywhere in the range of the Mojave desert tortoise since 2007.

Density of Juvenile Mojave Desert Tortoises: Survey results indicate that the proportion of juvenile desert tortoises has been decreasing in all five recovery units since 2007 (Allison and McLuckie 2018). The probability of encountering a juvenile tortoise was consistently lowest in the Western Mojave Recovery Unit. Allison and McLuckie (2018) provided reasons for the decline in juvenile desert tortoises in all recovery units. These included decreased food availability for adult female tortoises resulting in reduced clutch size, decreased food availability resulting in increased mortality of juvenile tortoises, prey switching by coyotes from mammals to tortoises, and increased abundance of common ravens that typically prey on smaller desert tortoises.

Abundance of Adult Mojave Desert Tortoises: Because the area available to tortoises (i.e., tortoise habitat and linkage areas between habitats) is decreasing, trends in tortoise density no longer capture the magnitude of decreases in abundance (Allison and McLuckie 2018). Hence, Allison and McLuckie reported on the change in abundance or numbers of the Mojave desert tortoises in each recovery unit (Table 2). They noted that these estimates in abundance are likely higher than actual numbers of tortoises and the changes in abundance (i.e., decrease in numbers) are likely lower than actual numbers because of their habitat calculation method. They used area estimates that removed only impervious surfaces created by development as cities in the desert expanded. They did not consider degradation and loss of habitat from other sources, such as the recent expansion of military operations, intense or large scale fires , development of utility-scale solar facilities, or other sources of degradation or loss of habitat (e.g., recreation, mining, grazing, infrastructure, etc.). Thus, the declines in abundance of the Mojave desert tortoise are likely greater than those reported in Table 2.

Table 2. Estimated change in abundance of adult Mojave desert tortoises in each recovery unit between 2004 and 2014 (Allison and McLuckie 2018). Decreases in abundance are in red.

Recovery Unit	Modeled Habitat (km^2) (% of habitat)	2004 Abundance	2014 Abundance	Change in Abundance	Percent Change in Abundance
Western Mojave	23,139 (33.78%)	131,540	64,871	-66,668	-51%
Colorado Desert	18,024 (26.31%)	103,675	66,097	-37,578	-36%
Northeastern Mojave	10,664 (15.57%)	12,610	46,701	34,091	270%
Eastern Mojave	16,061 (23.54%)	75,342	24,664	-50,679	-67%
Upper Virgin River	613 (0.89%)	13,226	10,010	-3,216	-24%
Total	**68,501 (100%(**	**336,393**	**212,343**	**-124,050**	**-37%**

Important points from this table include:

1. Only one recovery unit had an increase in abundance of adult desert tortoises, while four declined.
2. The four declining recovery units comprise 84.52% of the modeled habitat.
3. The one recovery unit with the increase in abundance of adult desert tortoises represents 15.57% of the habitat.

Habitat Availability: Data on population density or abundance does not indicate population viability. The area of protected habitat or reserves for the subject species is a crucial part of the viability analysis along with data on density, abundance, and other population parameters. In the Desert Tortoise (Mojave Population) Recovery Plan (USFWS 1994a), the analysis of population viability included population density and size of reserves (i.e., areas managed for the desert tortoise) and population numbers (abundance) and size of reserves. The USFWS Recovery Plan reported that as population densities for the Mojave desert tortoise decline, reserve sizes must increase, and as population numbers (abundance) for the Mojave desert tortoise decline, reserve sizes must increase (USFWS 1994a). In 1994, reserve design (USFWS 1994a) and designation of Critical Habitat (USFWS 1994b) were based on the population viability analysis from numbers (abundance) and densities of populations of the Mojave desert tortoise in the early 1990s. Inherent in this analysis is that the lands be managed with reserve level protection (USFWS 1994a, page 36) or ecosystem protection as described in section 2(b) of the FESA, and that sources of mortality be reduced so recruitment exceeds mortality (that is, lambda > 1)(USFWS 1994a, page C46).

Habitat loss also disrupts the prevailing population structure of this widely distributed species with geographically limited dispersal (isolation by distance; Murphy et al. 2007; Hagerty and Tracy 2010). Allison and McLuckie (2018) anticipate an additional impact of this habitat loss/degradation is decreasing resilience of local tortoise populations by reducing demographic connections to neighboring populations (Fahrig 2007). Military and commercial operations and infrastructure projects that reduce tortoise habitat in the desert are anticipated to continue (Allison and McLuckie 2018) as are other sources of habitat loss/degradation.

Allison and McLuckie (2018) reported that the life history of the Mojave desert tortoise puts it at greater risk from even slightly elevated adult mortality (Congdon et al. 1993; Doak et al. 1994), and recovery from population declines will require more than enhancing adult survivorship (Spencer et al. 2017). The negative population trends in most of the TCAs for the Mojave desert tortoise indicate that this species is on the path to extinction under current land management conditions (Allison and McLuckie 2018). They state that their results are a call to action to remove ongoing threats to tortoises from TCAs, and possibly to contemplate the role of human activities outside TCAs and their impact on tortoise populations inside them.

In the desert tortoise population viability analysis in the USFWS's Recovery Plan (USFWS (1994a), to improve the status of the Mojave desert tortoise, reserves (area of protected habitat) must be established and managed. When densities of tortoises decline, the area of protected habitat must increase. When the abundance of tortoises declines, the area of protected habitat must increase. We note that the Desert Tortoise (Mojave Population) Recovery Plan was released in 1994 and its report on population viability and reserve design was reiterated in the 2011 Revised Recovery Plan as needing to be updated with current population data (USFWS 2011, p. 83). With lower population densities and abundance, a revised population viability analysis would show the need for greater areas of habitat to be protected or larger reserves for the Mojave desert tortoise. In addition, we note that none of the recovery actions that are fundamental tenets of conservation biology has been implemented throughout most or all of the range of the Mojave desert tortoise. Although TCAs/CHUs have been designated on maps for the Mojave desert tortoise, these reserve areas are not managed for the Mojave desert tortoise.

Upgrade Legal Status from Threatened to Endangered

The Endangered Mojave Desert Tortoise

The Council believes that the Mojave desert tortoise meets the definition of an endangered species. In the FESA, Congress defined an "endangered species" as "any species which is in danger of extinction throughout all or a significant portion of its range…" In the California Endangered Species Act (CESA), the California legislature defined an "endangered species" as a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant, which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes (California Fish and Game Code § 2062). Because most of the populations of the Mojave desert tortoise were below the viable threshold in 2014, most are declining, and the threats to the Mojave desert tortoise are numerous and have not been substantially reduced throughout the species' range, the Council believes the Mojave desert tortoise should be designated as an endangered species by the USFWS and CDFW.

Agassiz's desert tortoise is now on the list of the world's most endangered tortoises and freshwater turtles. It is in the top 50 species. The International Union for Conservation of Nature's (IUCN) Species Survival Commission, Tortoise and Freshwater Turtle Specialist Group, now considers Agassiz's desert tortoise to be Critically Endangered (Turtle Conservation Coalition 2018). It is one of three turtle and tortoise species in the United States to be critically endangered.

In summary, the densities and numbers of adult desert tortoises, densities of juvenile tortoises, and quality and quantity of desert tortoise habitat declined substantially between 2004 and 2014. These data clearly show that current land management plans and actions including standard mitigation by federal, state, and local agencies for the Mojave desert tortoise are inadequate to recover the desert tortoise. They have been ineffective in halting population declines range-wide, and have resulted in a majority of the 17 populations falling below the minimum density for viability. The Council believes that the data show that a continuation of current management actions are inadequate in preventing the extirpation of the Mojave desert tortoise in California.

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