Testimony of the Utah Division of Wildlife Resources before the House Natural Resources Subcommittee on Federal Lands April 22, 2024

Chairman Curtis, Representative Maloy, Moore, and other distinguished members of the Federal Lands Subcommittee, thank you for coming to the great state of Utah and allowing me to provide information for the record regarding the status of the Mojave desert tortoise (MDT) as part of the Northern Corridor project. Speaking on behalf of the Utah Division of Wildlife Resources (UDWR), we are very grateful to the members of the Utah Delegation for bringing this issue forward. My name is J. Shirley, and I am the Director of the State of Utah's Department of Natural Resources, Division of Wildlife Resources. The UDWR has been granted authority over wildlife and its management within the state borders and, therefore, is the state's wildlife expert.

The UDWR has 2023 MDT population estimates, updated from the 2019 MDT population estimate, within the Red Cliffs National Conservation Area (NCA) to assess the impacts of the 2020 wildfires on the Mojave desert tortoise. **The MDT populations across the NCA have stabilized, and there is no evidence of recent declines in tortoise densities following the 2020 wildfires (Figure 18a). The 2023 abundance estimate of 2,425 individuals across the NCA (Zones 2, 3, and 5) is the highest recorded since 2005.**

Summary of UDWR. 2024. MOJAVE DESERT TORTOISE POPULATION MONITORING WITHIN THE RED CLIFFS NATIONAL CONSERVATION AREA, 2023. Publication Number 24-07.

- Primary goal: Determine the current tortoise density and long-term demographic and population trends for desert tortoises within the Red Cliffs NCA.
    - Obtaining population estimates in the calendar year 2023, exactly 25 years since the full-scale implementation of the monitoring program, will allow for trend evaluation of one tortoise generation, an important recovery criterion.
    - Population monitoring efforts were concentrated on federal lands within Management Zones 2, 3, 4, and 5 in the Red Cliffs NCA; additional surveys were conducted in surrounding areas on State Trust Institutional Lands Administration (STILA) and Utah Department of Natural Resources (UDNR) lands.
- Secondary goal: to evaluate the effectiveness of the recovery program and implement appropriate adaptive management strategies to recover desert tortoises in the Upper Virgin River Recovery Unit (UVRRU).

Relevant Findings:

- Since 2009, tortoise populations across the NCA appear to have stabilized, and there is no evidence of recent declines in tortoise densities (Figure 18a)

- We estimate there are 2,425 adult tortoises across Management Zones 2, 3, and 5, and an additional 359 adult tortoises estimated in Management Zone 4, the translocation site for displaced tortoises. Our abundance estimate of 2,784 adult tortoises in Zones 2-5 is

similar to abundance estimates from a 2023 drone survey which estimated 2,609 animals (Bandy 2023)

- **Our 2023 abundance estimate of 2,425 across the NCA (Zones 2, 3, and 5) is the highest recorded since 2005**. Further, translocating displaced tortoises helped establish a robust population within Management Zone 4 (UDWR 2019). These estimates are also similar to the 2023 drone surveys, although drone estimates were slightly lower (1,221 adult tortoises; Bandy 2023).

- In general, the majority of tortoises appeared healthy, with appropriate muscle mass and weight. We observed numerous tortoises actively foraging with green around their mouths. In addition, we observed a high number of recaptures relative to previous years. Interestingly, we recaptured seven tortoises that were originally marked 26 to 51 years prior. Four of those tortoises were marked with a distinctive permanent marking system (e.g., drill holes in marginals) that was implemented prior to 1985 in the Paradise Canyon and Red Cliffs Recreation Area.

- Densities within the NCA are currently higher than many other Mojave desert tortoise populations, range wide (2.2 to 7.2 tortoises per km2; USFWS 2021b).

- Recovery actions implemented as part of the Washington County Habitat Conservation Plan, including protection of existing habitat, restoration of degraded habitat (e.g., disturbed, burned), tortoise fencing on the perimeter of the NCA, community education programs, translocation of displaced animals, addition of Management Zone 6, and law enforcement presence, are important to maintain stable populations. In addition, the NCA designation in 2009 offered additional regulations and oversight to protect tortoises and their habitat (Pub.L. 111-11, H.R. 146).

- **Zone 6 provides additional protection for an estimated 772 tortoises. It protects an additional 6,813 acres of habitat in the Reserve that has not been impacted by fires in the recent past** (Bandy 2022).

Zone 6 Long-term Benefits

Washington County has identified Zone 6 as mitigation for the Northern Corridor and the loss of DNR land purchased with USFWS Section 6 funds. Zone 6 has experienced very little fire (80 acres since 1976) and has an intact vegetation community with 50% fewer noxious weeds and invasive species compared to the rest of the reserve. Being separated from the other zones allows Zone 6 to serve as a refuge population.

Incorporating Zone 6 is valuable because “desert tortoises are long-lived; they may persist in an isolated and small area for a long time and still maintain a resource pool for genetic diversity. However, over several generations, a minimum abundance level is necessary to ensure successful reproduction and to avoid inbreeding depression and loss of fitness. Connectivity

within and between areas can help maintain demographic and genetic needs (USFWS 2011)." Protecting the SITLA and other non-federal lands in Zone 6 provides resilience and redundancy.

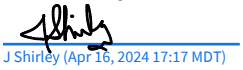
"The protection of additional habitat within the UVRRU (e.g., Management Zone 6) increases the viability of desert tortoises living within the protected habitat and provides resiliency and redundancy against the cumulative threats they face (USFWS 2021b)".

Conclusion

The most recent population monitoring report found MDT populations across the NCA have stabilized, and there is no evidence of recent declines in tortoise densities following the 2020 wildfires. The 2023 abundance estimate of 2,425 individuals across the NCA (Zones 2, 3, and 5) is the highest recorded since 2005.

The DWR's updated population monitoring validates the U.S. Fish and Wildlife Service's original 2021 findings in the Final Biological Opinion for the Northern Corridor Highway Project, in that the ROW for the Northern Corridor "is not likely to jeopardize the continued existence of the desert tortoise in the UVRRU and rangewide… [and] the proposed action is not likely to destroy or adversely modify designated critical habitat for the desert tortoise." (USFWS 2021a). Furthermore, the 6,813 acres of land within Zone 6 is high-quality, year-long habitat for MDT populations and adds resiliency and redundancy to the UVRRU.

Sincerely,



J Shirley (Apr 16, 2024 17:17 MDT)

J. Shirley
Division of Wildlife Resources
Director

Citations

Bandy, M. 2022. A method for Mojave Desert Tortoise Drone Surveys and a Controlled Field Test. Report submitted to the Washington County Habitat Conservation Plan. Resi-2022-001-02.

Bandy, M. 2023. Drone surveys for the Mojave Desert Tortoise in Zones 2-5 of the Red Cliffs Desert Reserve. Report submitted to the Washington County Habitat Conservation Plan. Resi-2023-014-01.

U.S. Fish and Wildlife Service (USFWS). 2021a. Biological Opinion for the Northern Corridor Highway Project. January 2021. Utah Ecological Services Field Office, Salt Lake City, Utah. 100 pages

U.S. Fish and Wildlife Service (USFWS). 2021b. Biological report for the Upper Virgin River recovery unit 14 population of the Mojave desert tortoise (Gopherus agassizii), Version 1. January 2021. Utah Ecological Services Field Office, Salt Lake City, Utah. 119 pages plus appendices.

U.S. Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the desert tortoise (Gopherus agassizii). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California.

Utah Division of Wildlife Resources (UDWR). 2024. MOJAVE DESERT TORTOISE POPULATION MONITORING WITHIN THE RED CLIFFS NATIONAL CONSERVATION AREA, 2023. Publication Number 24-07.

Utah Division of Wildlife Resources (UDWR). 2019. Translocation in the Red Cliffs Desert Reserve, Summary Report, 1999-2018. Utah Div. of Wildl. Res., Publ. Number 98-04.

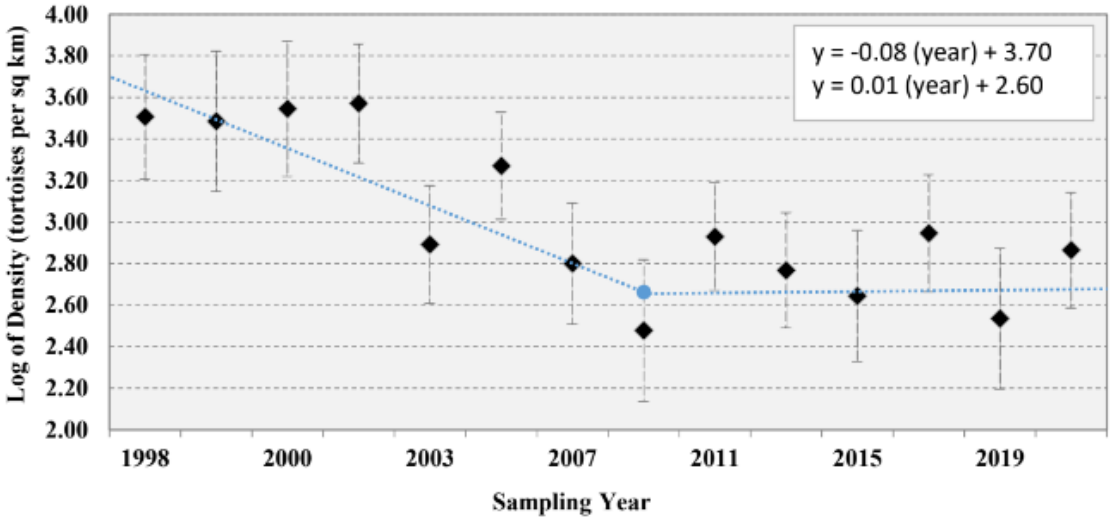


Figure 18a. Log density estimates and the piecewise linear regression model for desert tortoise populations in Management Zone 3, 1998 to 2023, Red Cliffs National Conservation Area and surrounding areas, Washington County, Utah. Vertical lines represent the 95% confidence interval. Breakpoint at year 2009 with regression equation 1, y=-0.08 (year) + 3.70, and regression equation 2, y = 0.01 (year) + 2.60.

Table 5. Summary of adult shell remains observed on transects with time since death (TSD) estimated at less than 1 year, total line length (km), encounter rate (*n/l*), live adult tortoises observed on transects and annualized mortality rate during population monitoring, Red Cliffs National Conservation Area and surrounding areas, 1998 to 2023, Washington County, Utah. Annualized mortality rate [(*n*/(N+*n*))*100] was calculated where *n* is the number of shells observed on transects (TSD < 1 yr) and N is the estimated abundance of live adults observed on transects during the monitoring season. Population surveys in 2006 and 2021 were conducted only in burned habitat within the perimeter of the 2005 and 2020 wildfires respectively. Mortality rate could not be calculated in 2006 as transects were completed in fall and winter, immediately following the 2005 wildfires (McLuckie et al. 2007).

Year	Shells Remains TSD < 1 yr	Line Length (km)	Encounter Rate (*n/l*)	Live Adult Encounters	Annualized Mortality Rate (%)
1998	5	193.4	0.03	138	3.5
1999	9	296.0	0.03	192	4.5
2000	13	289.0	0.04	191	6.4
2001	9	302.0	0.03	181	4.7
2003	52	298.8	0.19	100	34.2
2005	25	293.7	0.09	167	13.0
2006	38	90.3	0.63		
2007	14	296.4	0.05	106	11.7
2009	16	298.5	0.06	88	15.4
2011	18	298.9	0.06	124	12.7
2013	9	302.6	0.03	108	7.7
2015	4	300.2	0.01	94	4.1
2017	3	266.2	0.02	112	2.6
2019	7	262.0	0.04	100	6.5
2021	4	88.3	0.17	33	10.8
2023	2	314.6	0.01	139	1.4