

July 8, 2024

Bureau of Land Management
St. George Field Office
345 East Riverside Dr
St. George, UT 84790

RE: Comments on the Draft Supplemental Environmental Impact Statement to Reconsider a Highway Right-of-Way and Associated Amendment of an Incidental Take Permit, Washington County, Utah

Dear Ms. Ferris-Rowley:

On behalf of the undersigned organizations that represent the interests of millions of Americans in Utah and across the nation, please accept the following comments on the *Draft Supplemental Environmental Impact Statement (SEIS) to Reconsider a Highway Right-of-Way and Associated Amendment of an Incidental Take Permit, Washington County, Utah*.

The undersigned organizations have a long history of collaborative partnerships with the Bureau of Land Management (BLM) and the U.S. Fish and Wildlife Service (FWS), in addition to a record of scientific research on critical issues—like the Mojave desert tortoise—affected by the proposed Northern Corridor Highway. Conserve Southwest Utah has a current Cooperative Agreement with the BLM for a “*Mojave desert tortoise and BLM Sensitive Species Population and Habitat Use Study in the Beaver Dam Wash National Conservation Area (NCA)*” and is therefore recognized by the BLM as a trusted research partner with an elevated authority in regards to the tortoise.

In this comment letter, we provide new information and analyses along with review of existing information for inclusion and consideration in the SEIS to supplement our previously submitted comments ([Attachment A](#)) that raised numerous issues that remain relevant today.

The Draft SEIS clearly shows that in comparison to the alternatives *outside* Red Cliffs NCA, the Northern Corridor Highway alternatives *through* Red Cliffs NCA would:

- Affect the highest number of historic properties and Indigenous resources;
- Degrade the recreation user experience, access, landscape character, and scenic vistas;
- Increase the spread of noxious weeds and invasive species;
- Increase the probability of unnatural wildfire, which in turn expedites invasion of invasive plants;
- Increase fragmentation which leads to habitat degradation and lower permeability for wildlife;
- Negatively impact more acres of desert tortoise habitat and lead to the translocation and indirect impact of more adult tortoises; and
- Negatively impact the Green Springs, Middleton, Warm Springs, and Brio neighborhoods.

Washington County’s preferred Northern Corridor Highway route cuts through lands specifically protected as mitigation for development of Mojave desert tortoise habitat

elsewhere in Washington County. The proposed highway alternatives through Red Cliffs NCA would strike through some of the most important Mojave desert tortoise habitat in the recovery unit for the entire species, essentially stranding a MDT population cluster in an isolated tract surrounded by highways and undoing significant, historical investments by BLM, FWS, and others for the recovery of this remarkable reptile. Development of these mitigation lands would undermine acceptance of and faith in the value of mitigation going forward. Furthermore, enabling the construction of a major highway through Red Cliffs NCA not only is illegal but also sets a troubling precedent for the entire National Conservation Lands System.

We urge BLM to deny Utah Department of Transportation's right-of-way application for the Northern Corridor Highway through Red Cliffs NCA. There are better routes that meet Washington County's traffic needs without irreparably destroying Red Cliffs NCA's recreation, habitats, scenic vistas, and Indigenous resources.

Additionally, Conserve Southwest Utah commissioned an expert review of Washington County's updated traffic analysis. The initial findings of this expert review are included in [Attachment B](#) and the full expert review report will be completed and submitted to BLM as soon as it is available. Given that the updated traffic analysis was only just released to the public on June 20th—allowing only 19 days to comment on this updated analysis—we respectfully request that BLM consider and incorporate the findings from Conserve Southwest Utah's expert review in the final SEIS.

Sincerely,

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Table of Contents

Table of Contents.....	4
Cultural Resources.....	5
Environmental Justice.....	8
Environmental Justice Cumulative Impacts.....	10
Fire and Fuels Management.....	10
Fire and Fuels Management Cumulative Impacts.....	13
HCP/ITP.....	14
LWCF and Section 6 Lands.....	16
LWCF and Section 6 Lands Cumulative Impacts.....	19
Mojave Desert Tortoise.....	20
Mojave Desert Tortoise Cumulative Impacts.....	24
Noxious Weeds and Invasive Species.....	25
Noxious Weeds and Invasive Species Cumulative Impacts.....	28
Socioeconomics.....	28
Socioeconomics Cumulative Impacts.....	32
Special Status Plants.....	32
Special Status Plants Cumulative Impacts.....	33
Transportation Analysis.....	33
Zone 6.....	36
References.....	37

Cultural Resources

The National Historic Preservation Act (NHPA), 54 U.S.C. §§ 300101–320303, formally recognizes cultural and historic preservation as an important policy of the United States. Section 106 of the NHPA seeks to protect America’s heritage in part by requiring federal agencies to take into account the effects of their “undertakings” on historic properties. See 54 U.S.C. § 306108; 36 C.F.R. § 800.1(a).

To adequately “take into account” the impacts on archeological resources, all federal agencies must comply with binding Section 106 regulations established by the Advisory Council on Historic Preservation (Advisory Council). The Section 106 process is a “stop, look, and listen provision” that entails four basic steps. *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 805 (9th Cir. 1999). First, the responsible agency must “determine whether the proposed Federal action is an undertaking . . . and, if so, whether it is a type of activity that has the potential to cause effects on historic properties.” *Id.* § 800.3(a). An “undertaking” is any “project, activity, or program . . . requiring a Federal permit, license or approval.” *Id.* § 800.16(y). A “historic property” is “any prehistoric or historic district, site, building, structure, or object included on, or determined eligible for inclusion on, the National Register [of Historic Places]” (“National Register”). *Id.* § 800.16(l)(1); 54 U.S.C. § 300308. Second, if the agency undertaking has the potential to affect historic properties, the agency must define the Area of Potential Effects for the action. 36 C.F.R. § 800.4. The NHPA regulations define the Area of Potential Effects as:

the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties
The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

Id. § 800.16(d). Third, the agency must make a “reasonable and good faith effort” to identify historic and cultural properties within the Area of Potential Effects. *Id.* § 800.4(b)(1). This effort “may include background research, consultation, oral history interviews, sample field investigation, and field survey.” *Id.* § 800.4(b)(1). Fourth, if the agency finds that eligible properties are present in the Area of Potential Effects, it must assess whether the proposed undertaking may affect the identified historic properties, in coordination with consulting parties. *Id.* § 800.4(d). Having identified the historic properties that may be affected, the agency considers whether the effect will be adverse, using the broad criteria and examples set forth in section 800.5(a)(1). Adverse effects include the “[p]hysical destruction of or damage to [all or part of the property],” as well as “[i]ntroduction of visual, atmospheric or audible elements that diminish the integrity of the property’s historic significant historic features.” *Id.* § 800.5(a)(2)(i) & (2)(v).

If the agency concludes that the undertaking’s effects do not meet the “adverse effects” criteria—that is, the agency concludes that there *may not* be an adverse effect from the undertaking—it is to document that conclusion and propose a finding of “no adverse effects.” *Id.* § 800.5(b), 800.5(d)(1). If the agency official concludes that there *may be* an adverse effect, it engages the public and consults further with the state historic preservation officer, Native American tribes, consulting parties, and the Advisory Council in an effort to resolve the adverse effects. *Id.* §§ 800.5(d)(2), 800.6. The Section 106 process concludes with an

agency determination that the proposed action is either likely to have an “adverse effect” or “no adverse effect” on historic properties. See *id.* § 800.5(d).

If adverse effects cannot be resolved, the process is elevated again to the Advisory Council on Historic Preservation and the head of the agency undertaking the action. *Id.* § 800.7. Until this process is complete, the undertaking in question cannot go forward. An agency may use the process under the National Environmental Policy Act (NEPA) to comply with Section 106 in lieu of separate procedures set forth specifically for Section 106 consultation if the agency has notified in advance the State Historic Preservation Officer and the Advisory Council, and meets consultation and analysis requirements. See *id.* § 800.8(c). Importantly, if during the preparation of its NEPA analysis the agency concludes that the effects of the undertaking on historic properties are adverse, the agency shall develop and adopt measures to avoid, minimize, or mitigate such effects. *Id.* § 800.8(c)(4).

In BLM’s 2020 Final Environmental Impact Statement for the proposed Northern Corridor highway and associated actions (2020 FEIS), identification efforts within the Area of Potential Effects (a 700-foot wide corridor along each possible highway alignment in the NCA) included a literature review and Class III level field inventory. Draft SEIS at 68. In the FEIS, BLM determined that granting Utah Department of Transportation’s Northern Corridor Highway right-of-way would adversely affect historic properties located within the Red Cliffs NCA, directly impact cultural resources, and cause permanent or long-term effects to archaeological sites eligible for listing on the National Register of Historic Places. As part of its obligations under the NHPA, BLM has not yet resolved adverse effects to Historic Properties in the Northern Corridor. Instead, BLM included a stipulation in the 2020 right-of-way grant stating that a “Notice to Proceed with construction and operation of the highway would not be issued until an MOA had been developed through consultations with American Indian Tribes and other parties and adverse effects to Historic Properties resolved through the implementation of approved treatments.” Draft SEIS at 69. At the same time, the NHPA consultation process initiated as part of the 2020 FEIS process resulted in the development of a Programmatic Agreement to resolve future, but presently unknown, effects of the FWS’ issuance of an Incidental Take Permit for Mojave desert tortoise to Washington County.

Although it is heartening to see what appears to be a more robust Section 106 process in the SEIS compared to the 2020 FEIS, especially with respect to communication with interested Tribes, there are still several issues that BLM must resolve prior to issuing a Final SEIS and Record of Decision to comply with its obligations under NEPA and the NHPA. These include:

1. BLM must define and explain why it has delineated a 700-foot-wide corridor overlaying potential highway right-of-ways as the Area of Potential Effect for the proposed project. As in the 2020 FEIS, BLM still has not offered any explanation for its delineation of the Area of Potential Effects, when this area does not fully account for the likely direct and indirect impacts of a proposed highway alignment in the NCA. This is particularly important for consulting parties, Tribes, and members of the public to determine whether BLM has adequately analyzed reasonably foreseeable direct, indirect and cumulative effects to historic properties from a four-lane highway through the NCA

2. BLM must *complete* Section 106 consultation before it issues a final decision. Here, the agency has concluded that the Northern Corridor Highway, in any alternative with alignment in the NCA, may adversely affect historic properties. Therefore, it must consult with affected parties “to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects.” 36 C.F.R. §§ 800.5(d)(2), 800.6(a). This resolution usually takes the form of a Memorandum of Agreement (“MOA”), which signifies agreement upon how the parties will resolve the detrimental impacts of the undertaking. *Id.* § 800.6(c). If adverse effects cannot be resolved, the process is elevated to the Advisory Council on Historic Preservation and agency head. *Id.* § 800.7.

Unlike in the 2020 FEIS, the Draft SEIS indicates that BLM has committed to completing the Section 106 process (and to resolving detrimental impacts of the potential project) prior to issuing the Record of Decision. Draft SEIS at 93. This will take the form of an MOA that would address the resolution of adverse effects to historic properties, based on implementation of approved treatments. BLM must ensure that it consults with Tribes and other consulting parties as it develops the MOA. BLM must also submit any MOA, along with necessary documentation to the Advisory Council before approving the undertaking. 36 C.F.R. § 800.6(b)(1)(iv).

3. “Conservation, protection, and enhancement of cultural and historical resources was identified as one of the purposes for the Congressional designation of the NCA.” Draft SEIS at 67. It is clear from both BLM’s effects analysis during the 2020 FEIS process and its ongoing Section 106 consultation process now that a right-of-way in Red Cliffs NCA *will* adversely affect historic properties and cultural resources. Draft SEIS at 68-71. Indeed, BLM’s 2020 analysis concluded that the highway can be expected to cause “[p]hysical destruction of or damage to all or part of the historic property,” which includes a petroglyph panel with artifact scatter, prehistoric artifact scatters and other historic properties, among other adverse impacts. AR 037504-05; *see also* AR 043769.¹ It is also unlikely that these adverse effects could be adequately resolved if BLM allows the right-of-way in its preferred alignment within the NCA. The destruction of cultural sites and historic resources is likely, and this is not consistent with the 2009 Omnibus Public Lands Act and the purposes for Congressional designation of the NCA.

4. Under NEPA, BLM must analyze and take a “hard look” at direct, indirect, and cumulative effects to cultural resources, *regardless* of whether those cultural resources are eligible for listing in the National Register. *See* BLM Manual 8100 – The Foundations for Managing Cultural Resources (Public) .03.F (Dec. 3, 2004) (“Cultural resources need not be determined eligible for the National Register of Historic Places . . . to receive consideration under [NEPA].”).

Thus far, BLM has failed to take an adequate hard look in the Draft SEIS at the direct, indirect, and cumulative impacts to cultural resources from a possible highway alignment in the Red Cliffs NCA, because it has not fully considered impacts to ineligible sites and isolated finds. To bolster its NEPA analysis, the Final SEIS must include more than a very general and cursory assessment of potential impacts that a

¹ Cites to “AR” are referring to the Administrative Record filed with the litigation over the 2020 FEIS. *See Conserve Sw. Utah v. U.S. Dep’t of Interior*, Case No. 21-1506 (ABJ).

four-lane highway can have to cultural resources. Note that this is *in addition to* the required NHPA and Section 106 consultation process, they are not interchangeable. This analysis should include potential effects from vandalism, growth-inducing effects of a new major roadway, soil erosion and site displacement, increased wildfire risks, and effects from dust, noise, and vibration. Particularly because much of the NCA has yet to be formally surveyed, failing to take this “hard look” at impacts of the Northern Corridor Highway could be devastating to cultural resources.

5. Finally, BLM should continue and increase its consultation and engagement with Native American Tribes. During the 2020 FEIS process, it was clear that tribal consultation was a process amounting to nothing more than a form letter and a “box check” with potentially interested Tribes. For example, BLM failed to adequately respond to entities such as the Hopi Tribe, whose requests for information, further study, and meaningful involvement in the EIS process were largely ignored. Especially in keeping with the President’s *Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships*, which charges all federal agencies to engage in “regular, meaningful, and robust consultation with Tribal officials,”² BLM and FWS must seek to ensure that they are meaningfully consulting with Tribes and incorporating Tribal concerns, input, and perspectives into this decision process.

Environmental Justice

We support the BLM’s reevaluation of Environmental Justice Impacts based on Executive Order 14096, Revitalizing our Commitment to Environmental Justice for All, and updated census data.

The draft SEIS asserts that environmental justice populations are adversely affected by construction-related impacts, increased risk of wildfire, air pollution, and the breakup of cultural and ethnic communities for all three alternatives within the NCA (Bureau of Land Management (BLM), 2024, 76). The three alternatives within the NCA clearly negatively impact environmental justice communities, and that impact will likely be increased by various other relevant factors not considered in the draft SEIS. It is therefore important that BLM incorporate the following considerations into the final SEIS:

(1) **Exacerbating climate change:** Transportation is the number one source of anthropogenic greenhouse gas emissions in the United States (EPA, Office of Transportation and Air Quality, 2024). Car-centric planning, as we are seeing associated with the Northern Corridor Highway, induces demand for additional car travel (Duranton & Turner, 2011).

The recently released traffic analysis by the MPO/Horrocks points to the fact that VMT will increase for all except the no-action alternative. The report highlights:

“This is typical with roadway improvements as bottlenecks in the network are removed and people can travel longer distances in shorter amounts of time.” (MPO 2024, p. 22)

² White House Briefing Room, *Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships* (Jan. 26, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>.

Against common assertions that congestion increases emissions, fuel use has been shown to increase with a decrease in congestion, as driving becomes more convenient and vehicle miles traveled increase (Newman et al., 2017). In turn, induced travel increases emissions such as greenhouse gas emissions, particulate matter, and other pollutants, the externalities of which, as pointed out in the draft SEIS, disproportionately affect environmental justice populations (Bureau of Land Management (BLM), 2024, 76). The Transportation Commission of Colorado has recently adopted a formal rule that makes planning authorities demonstrate how new transportation projects, including highways, reduce greenhouse gas emissions. The State of Minnesota is following a similar approach, and New York and Maryland are also considering similar legislation (Kimble, 2024). Because environmental justice populations are already more susceptible to the negative impacts of climate change, BLM must consider how the increase in greenhouse gas emissions that is likely to result from all three highway alternatives within the NCA will further compound these impacts.

(2) **Impacting accessible open space:** All of the three highway alternatives within the NCA would destroy open space within close proximity to environmental justice populations. The NCA offers nature and open space for residents of the area that is accessible without driving long distances or without driving at all. Access to nature and open space have shown to offer significant benefits for population health and wellbeing, but are traditionally less available to low-income and minority populations (Marcia et al., 2021). Proximity is key to accessing these benefits (Banta & Davila IV, 2024). According to the database 'NatureQuant'³, many of the areas recognized as Environmental Justice Population Census Tracts in the draft SEIS are classified 'nature light' or 'nature deficient' as is (*NatureScore® - Determine the Quality and Quantity of Natural Elements for a Location*). Enhancing access to trails, parks, recreation, and open space is part of the draft general plan of the City of St. George (City of Saint George, 2022) and the draft Saint George Downtown Plan (City of Saint George, 2022). Thus, BLM must consider how eliminating accessible open space will further impede these environmental justice populations' ability to engage with nature.

(3) **Overall effects of car-centric planning:** Crashes and other negative effects of car-centric planning—including violence, ill health, social injustice, and environmental damage—disproportionately harm environmental justice populations (Sheller, 2018). It is UDOT's stated mission to "Enhance quality of life through transportation", including better mobility for all, good health, connected communities, and a strong economy (Utah Department of Transportation (UDOT)).⁴ Contrary to this mission, car-dependent environments 'disable' people who do not drive by restricting access to essential needs and have a host of other negative impacts (Miner et al., 2024).

Nearly 40% of the population of Saint George and Washington City are under 16 or over 70 years of age and hence not able or less likely to drive or own a car (City of Saint George, 2017, ES-1; Washington City, Utah et al., 2017). Nationally, the number of people who cannot drive is estimated to comprise about 30% of the population, with numbers disproportionately higher for low-income populations (Zivarts, 2024).

Given that the alternatives within the NCA encourage car travel over other modes of transportation, BLM must consider the potential for negative impacts to environmental justice populations.

³ <https://www.naturequant.com/naturescore/>

⁴ <https://udot.utah.gov/connect/about-us/>

(4) **Procedural Equity:** While the draft SEIS asserts that “An outreach plan to Environmental Justice communities is being developed by BLM, consistent with Instruction Memorandum 2022-059 (BLM 2022b) and will be implemented as part of public outreach activities during the SEIS process (see Section 4.1),” other elements of procedural equity such as inclusive and legitimate representation, and active participation (Emami, 2015) should be given more consideration in order to give affected communities meaningful abilities to participate in all steps of the decision making process as mandated by Executive Order 14096 (Skinner-Thompson, 2022).

Based on the information and data presented in the EIS and draft SEIS and our additional remarks, we strongly urge the BLM to recommend an alternative outside of the NCA in order to fulfill their mandate under Executive Order 14096.

Environmental Justice Cumulative Impacts

The Final SEIS must better analyze the proposed action’s cumulative impacts, defined as “the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft SEIS listing potential future projects with terse descriptions does not constitute an adequate cumulative impacts analysis. Further, it does not take into account exacerbated effects of climate change, loss of accessible open space, and car-centric planning, as detailed in our above comments under ‘Environmental Justice.’

Fire and Fuels Management

Section 3.4 in both the Draft SEIS and 2020 FEIS discusses the potential impacts of each action alternative on fire and fuels management. The Draft SEIS supplements the 2020 analysis with brief discussions of climate change and fire, invasive species and fire, and the recent fires in the Red Cliffs NCA and Reserve. It concludes that the UDOT ROW Alignment, T-Bone Mesa Alignment, and Southern Alignment would each have substantial adverse impacts on fire and fuels management through the introduction of ignition sources during construction, daily vehicle travel, and increased human activity. The Draft SEIS also concludes that the Red Hills Parkway Expressway and St. George Boulevard/100 South One-Way Couplet alternatives would have relatively few such impacts, if any. As discussed below, the increased likelihood of fires in previously unburned, high-density tortoise areas that would result from the Northern Corridor Highway across Zone 3 weighs strongly in favor of the latter alternatives that do not cut through the NCA.

Although historically large fires were rare in the Mojave Desert, the frequency, extent, and intensity of fires in the region—and specifically the Red Cliffs NCA and Reserve—have dramatically increased due to the spread of invasive plants, more people, and climate change (Brooks & Esque, 2002). Table 3 and Figures 4 and 5 in the Draft SEIS clearly show this general pattern, which will likely become more pronounced if current climatic trends continue as expected (Ellis et al., 2022). Since 1993, 32 fires have burned approximately 34,227 acres within the Red Cliffs Reserve, with most of the fires (23) and nearly all the burned acreage (32,809 acres) occurring in the upper western portion of Zone 3. In 2020 alone, five human-caused fires burned a total of 12,437 acres within the Reserve, of which 9,854 acres were previously burned and 9,019 acres were designated critical tortoise

habitat. In July and October 2020—after BLM had largely completed the 2020 FEIS—the NCA and Reserve experienced the Cottonwood Trail, Lava Ridge, and Turkey Farm Road fires. These fires impacted approximately 20% of the Upper Virgin River Critical Habitat Unit, about 1/3 of which was previously unburned (USFWS, 2022).

The emerging pattern also shows that fire return intervals in previously burned areas are as short as 5-10 years (Hood & Miller, 2007), and areas that experience multiple burns exhibit an increased invasive plant cover and corresponding decrease in native plants that are favored by and critical to the long-term health of foraging desert tortoises (Klinger & Brooks, 2017; Drake et al., 2015; Brooks & Esque, 2002). Repeat fires in the same area create conditions that favor invasive plant communities over native communities (Stanton et al., 2023; Klinger & Brooks, 2017; Brooks & Esque, 2002), which significantly impacts ecosystem functions and fire regimes in the Mojave Desert (Drake et al., 2016). Invasive annual grasses are widely regarded as the most significant causative factor for the increase in fire frequency and total acreage burned over the last several decades (Underwood et al., 2019). This is part of the grass/fire cycle, in which burned areas are overtaken by exotic grasses that ultimately serve as fuel for future fires that burn more frequently and across larger areas than previous fires (USFWS, 2021; Underwood et al., 2019; Fusco et al., 2019; Klinger & Brooks, 2017).

Recurring fires, and the related loss of native shrubs and forbs and spread of invasive plant species, have devastating impacts on desert tortoise habitat, health, and survival. Accordingly, a 2019 workshop of tortoise experts from the FWS, BLM, Utah Division of Wildlife Resources, and Washington County determined that fires and the spread of invasive plants are the top threats to tortoise populations in the Upper Virgin River Recovery Unit (USFWS, 2021). Flames and high temperatures can cause direct mortality and injury, and the loss of native vegetation and cover can stress tortoises that do survive. In the longer term, replacement of native vegetation by annual invasive grasses following fires not only prevents revegetation by native perennials that are important sources of nutrition for tortoises, but also fuels future unnatural fires (Jennings & Berry, 2023; USFWS, 2021; Underwood et al., 2019; Fusco et al., 2019; Drake et al., 2016).⁵

The loss of species with low reproductive capacity and long generation times, like tortoises, often results in population-level effects (Kellam, 2020). Wildfires in the Red Cliffs NCA in 2005 and 2006, for example, resulted in direct losses of about 15% of the tortoise population and declines of up to 50% in some areas, and the population never recovered (Lundgren, 2023; Kellam, 2020). Further, a 2020 monitoring effort following the Cottonwood Trail fire reported the direct mortality of a significant number of adult, immature, and juvenile tortoises and predicted that the Cottonwood Trail and Turkey Farm Road fires “will likely have significant population-level effects on tortoises within their respective burn areas” (Kellam, 2020). Indeed, section 3.4.2 of the Draft SEIS explicitly recognizes that post-fire restoration work “is difficult and often unsuccessful.”

A significant spatial relationship also exists between wildfires and roads, where invasive plants typically predominate and numerous ignition sources are introduced through vehicle

⁵ Because the spread of invasive plants and fires are closely related and require an integrated management approach, our comments below on invasive plants species and noxious weeds are incorporated here by reference.

travel and increased human activity. One study determined that approximately 88% of all wildfires nationwide are caused by humans, and approximately 95% of these human-caused wildfires and over 90% of *all* wildfires occurred within 1/2 mile of a road (Morrison, 2007). The 2020 fires in the Red Cliffs NCA and Reserve all were human-caused, for example, and at least two fires (Cottonwood Trail and Turkey Farm Road) were the direct result of road-related activities.

Clearly, a new highway in the NCA and Reserve that supports tens of thousands of vehicles per day will increase the spread of invasive plant species and introduce additional ignition sources, further perpetuating the grass/fire cycle. (Smith et al., 2023; Drake et al., 2015; Seabloom et al., 2006; Brooks & Esque, 2002). BLM must also consider that between 80 to 90% of the lands crossed by the UDOT ROW Alignment, T-Bone Mesa Alignment, and Southern Alignment are unburned, and that such lands contain sufficient native vegetation to support the highest-density tortoise populations in the entire NCA and Reserve.⁶ A four-lane highway through the heart of this high-density tortoise area would all but ensure future fires, kicking off a new grass/fire cycle that will eventually eradicate native plants and suitable tortoise habitat in most if not all of Zone 3. Characterizing the highway as a “permanent fuel break” and suggesting this benefits the NCA and Reserve, as both the Draft SEIS and 2020 FEIS do, is nonsensical given that any highway will greatly increase the chance of fire in the first instance. Put differently, a road that may or may not limit the geographic scope of a fire that would not have ignited in the absence of the road must not be treated as a net benefit. And recent history has shown that strong winds and underlying drought conditions lead to larger fires that easily cross roads and interstates.

Here, with the high likelihood of catastrophic fires that will result from the construction, operation, and maintenance of a four-lane highway in an area of the Red Cliffs NCA and Reserve that is largely unburned and supports high-density tortoise populations, BLM should terminate the UDOT ROW and consider either the Red Hills Parkway Expressway or St. George Boulevard/100 South One-Way Couplet alternative. These alternatives fall outside the Red Cliffs NCA and Reserve and would fulfill the purpose and need for this action while better protecting the resource values for which the NCA was designated. According to the Draft SEIS, the Red Hills Parkway Expressway alternative would have “substantially fewer impacts” on fire and fuels management compared to the highway alignments through the Red Cliffs NCA and Reserve, and the St. George Boulevard/100 South One-Way Couplet alternative would have “no new impacts.”

Congress established the Red Cliffs NCA “to conserve, protect, and enhance” its ecological, scenic, wildlife, and natural resources, including the protection of threatened and endangered species such as the desert tortoise. 16 U.S.C. § 460www(a). Congress also directed BLM to prohibit all land uses that are inconsistent with these purposes. *Id.* § 460www(e)(1)–(2). The resources and values within the NCA that BLM is statutorily obligated to safeguard emanate from functioning native ecosystems that supply ecological necessities such as food, water, and habitat, and any further degradation of land health caused by fires will significantly limit the ecological function of these lands.

⁶ 2024 Draft SEIS Section 3.4.2 & Figures 4, 5, and 7.

BLM must also act consistent with its duty under FLPMA “to prevent unnecessary or undue degradation of [public] lands,” 43 U.S.C. § 1732(b), and to manage the lands in a manner that protects ecological and environmental values, preserves certain lands in their natural condition, and provides food and habitat for wildlife. *Id.* § 1701(a)(8). BLM’s substantive duty to prevent unnecessary or undue degradation of public lands lies at “the heart of FLPMA” and extends to all actions undertaken on BLM-managed public lands. *Mineral Policy Ctr. v. Norton*, 292 F. Supp. 2d 30, 33 (D.D.C. 2003). This duty “supplements requirements imposed by other federal laws” and is “distinct from requirements under NEPA.” *Ctr. for Biological Diversity v. U.S. Dep’t of Interior*, 623 F.3d 633, 644–45 (9th Cir. 2010).

Fire and Fuels Management Cumulative Impacts

The Final SEIS must better analyze the proposed action’s cumulative impacts, defined as “the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft SEIS listing potential future projects, with terse descriptions, does not constitute an adequate cumulative impacts analysis.

Table 26 in the Draft SEIS provides a lengthy list of various reasonably foreseeable future projects and actions in and near the analysis area. As an initial matter, the Draft SEIS relies on an outdated regional transportation plan prepared in 2019 and not the most recent plan adopted in May 2023. (DMPO, 2023). The final SEIS must ensure that the list of reasonably foreseeable future projects accurately reflects the current plan.

Further, section 3.12.3 of the Draft SEIS simply states that these reasonably foreseeable projects may provide additional vectors for ignition sources for wildfires and that, together with climate change and the increased spread of invasive plants, they “could cumulatively contribute to impacts to fire and fuels management.” Without further analysis, it is unclear how BLM is incorporating the compounding effects of these future projects into its analysis of the action alternatives at issue here.

In addition, neither the Draft SEIS nor 2020 FEIS meaningfully considers the fact that the City of St. George is planning a three-mile road—Cottonwood Springs Drive—that would cross an unburned portion of Zone 3 in the Red Cliffs NCA and Reserve to connect the Northern Corridor Highway with Red Hills Parkway. This road would further increase the spread of invasive plants and likelihood of fire (i.e., the grass/fire cycle) in high-density tortoise habitat and presumably will not be built absent approval and construction of the Northern Corridor Highway through Zone 3. The incremental and additive impacts of Cottonwood Springs Drive must therefore be analyzed in conjunction with the environmental effects caused by the proposed Northern Corridor Highway.

The Draft SEIS also mostly ignores the cumulative impacts related to the Babylon Road project, a proposed four-mile road through an unburned portion of Zone 4, and the proposed widening of Interstate 15 (from MP 13 to 27) along the entire southeastern boundary of Zone 3 and near the northwest corner of Zone 4. The final SEIS must analyze and consider the cumulative impacts associated with all these planned projects, among others.

The cumulative impact analysis of future projects near and adjacent to Zone 6 is also inadequate. The addition of Zone 6 to the Red Cliffs Reserve was intended to offset the impacts of the Northern Corridor Highway through Zone 3, and the Draft SEIS highlights that the protections for non-federal lands in Zone 6 will be lost if BLM selects either the Red Hills Parkway Expressway or St. George Boulevard/100 South One-Way Couplet alternative. However, the Draft SEIS and 2020 FEIS largely fail to account for the likely impacts of the proposed Western Corridor—a ten-mile road that would bisect the Red Bluff ACEC (designated for the primary purpose of protecting dwarf bear poppy habitat) and run near and adjacent to the western and southern boundaries of Zone 6. Although the addition of Zone 6 to the Reserve seemingly excluded the western half of the Red Bluff ACEC solely to accommodate the planned Western Corridor project, the Draft SEIS and 2020 FEIS give only a passing nod to this planned project. The Draft SEIS and 2020 FEIS also ignore the planned Gap Canyon Parkway project, a proposed 4.5-mile road near the northern boundary of Zone 6. The final SEIS must meaningfully analyze the likely impacts of these projects on native vegetation and the spread of invasive species in Zone 6, particularly when comparing invasive plant cover in Zone 6 versus the Red Cliffs Reserve for the purpose of analyzing impacts of the various action alternatives.

HCP/ITP

On November 16, 2023, the Court “**ORDERED** that the incidental take permit (ITP) issued to Defendant Washington County, Utah, biological opinions concerning Washington County’s amended Habitat Conservation Plan (HCP) and the Northern Corridor highway project, and the associated Record of Decision are **REMANDED** to the Fish and Wildlife Service for reconsideration.” *Conserve Sw. Utah v. U.S. Dep’t of Interior*, Case No. 21-1506 (ABJ), ECF No. 80. After remand, the U.S. Fish and Wildlife Service “agree[d] to reconsider the [Incidental Take Permit] . . . and, if necessary, review and update the associated biological opinion, incidental take statement, and incidental take permit, with a timeline for reconsideration by November 2024. *Id.*, ECF No. 75-2 ¶4. Reconsideration upon remand requires the agency to take further action with response to the original agency decision on review. *Limnia v. Dept. of Energy*, 857 F.3d 379, 386 (D.C. Cir.2017) (Kavanaugh). In other words, the Court ordered the FWS to make a new decision on Washington County’s application for an ESA Section 10 Incidental Take Permit through the current SEIS process. In the SEIS, however, the FWS has only agreed to evaluate the need for an amendment to the 2021 ITP. SEIS at ES-2. The FWS’s approach is unlawful, violates the Court’s November 2023 order, and further runs afoul of its commitments under the Settlement Agreement. We encourage FWS to reconsider its approach here, and use the current SEIS process to determine—as if in the first instance—whether or not (and under what terms and conditions) to grant Washington County’s application for an ITP.

In assisting the FWS in reaching this determination, we iterate and build upon the comments submitted during the scoping process, as discussed below. First, the FWS is without discretion to issue an ITP as applied by Washington County. Washington County has applied for a renewal of the 1996 ITP “without changes,” but the 2020 HCP and requested ITP substantively modify the conservation program under the 1995 HCP. For this reason, FWS cannot issue or reissue the ITP as requested, and Washington County must submit a new application complying with the substantive requirements of the ESA. In fact, it appears that Washington County has been aware of this issue, and yet has refused to submit a proper application and associated documentation. *See, e.g.*, AR 006949.

The FWS must examine and discuss the ecological and environmental costs to Mojave desert tortoise populations resulting from implementing the 2020 HCP, which increases take of Mojave desert tortoise when compared to authorized take under the 1995 HCP/1996 ITP. The 1996 ITP permits the "taking" of 1,169 tortoises. As of November 29, 2017, according to Washington County and Red Cliffs Desert Reserve, covered actions under the 1995 HCP had "taken" 742 Mojave desert tortoises, leaving additional take of only "427 tortoises left on permit." AR 007189. By 2019, this number had increased to 776 tortoises taken under the 1995 HCP. See Email, H. Whitcomb to G. Weekly *et al.* (dated Sept. 30, 2020 at 10:46.01 pm) (mispaginated). Yet, in a striking about face, in the 2020 HCP and the now-remanded 2021 ITP, Washington County "recalibrated" the math surrounding take of Mojave desert tortoise, now claiming that covered actions have only taken 257 tortoises. Washington County officials have noted from the very beginning of this process that Washington County's goal for the 2020 HCP has been to "get more take," far more take than remains under the 1996 ITP. AR 007216, 007733-35, 007226-7. As it happens, under the 2020 HCP and remand 2021 ITP, Washington County is seeking "take" of an estimated 2,640 Mojave desert tortoise in all life stages. AR 101717-8, 102067. This level of take far exceeds the take authorized under the 1995 HCP. See Email, H. Whitcomb to G. Weekly *et al.* (dated Sept. 30, 2020 at 10:46.01 pm) (mis-paginated).

The FWS must examine and discuss new and existing information concerning the change in Washington County's methodology in measuring "take" of Mojave desert tortoise. The 1995 HCP considered "take" to apply to tortoises in all stages of development. Indeed, in the HCP quarterly reports from the mid-to-late 1990s, the Desert Reserve routinely identified take as including juveniles and hatchlings. But now, under the 2020 HCP, Washington County considers take as limited only to tortoise "adults." 2020 HCP at 49. This change in methodology would have a significant impact on quantifying take, and the FWS must reject this effort to minimize past take of Mojave desert tortoise. Also, please identify and discuss any extant habitat conservation plan that excludes juveniles from the calculation of take under the ESA.

The FWS must reject Washington County's so-called habitat surrogate metric for measuring take; instead, the FWS must demand Washington County identify a numerical limit on take. An ITS may only utilize a surrogate instead of a numerical cap on take when FWS explains why it was impractical to express a numerical measure of take, and any surrogate must provide a "detectable measure of effect." Here, the FWS's ability to quantify expected levels of take of Mojave desert tortoise in the past, together with its similar quantification of take of Mojave desert tortoise regarding other extant HCPs and other projects, forecloses its reliance on others metrics of take. Instead, the FWS must require Washington County to quantify take in numeric form.

The FWS must also examine and discuss Washington County's habitat surrogate metric discussed for the first time in the 2020 HCP, which Washington County used to, simultaneously, reduce the quantification of past take and inflate authorized take under the 2020 HCP and remanded ITP.

The FWS must also examine and discuss the impacts on Mojave desert tortoise habitat and populations of Washington County's revised habitat mapping. Under the 1995 HCP, take was

permitted on a total of 12,264 acres of occupied Mojave desert tortoise habitat. Since that time, activities associated with the 1995 HCP resulted in the loss of approximately 5,700 acres of occupied habitat. Thus, at best, there remain perhaps 6,564 acres of occupied habitat subject to a take extension. Yet, the 2020 HCP requests incidental take authorization in the amount of a direct loss of up to an additional 14,466 acres of occupied Mojave desert tortoise habitat.

The FWS must examine new and existing information informing Washington County's conclusions regarding the Mojave desert tortoise population densities in Zone 6, including the fact that the surveyors collecting tortoise data in Zone 6 apparently lacked certification as Authorized Tortoise Biologists, and otherwise lacked the needed requirement of 480 hours of survey data "to have confidence in survey results." AR 008826-48. In addition, the FWS has been warned repeatedly that it would be scientifically improper to compare the tortoise densities in Zone 6 and Zone 3, because "two different methods were used to obtain density/abundance and different methods were used to identify the sampled area." AR 010280-90, 010657-58. Yet the 2020 HCP and ITP application continues to compare densities within Zone 6 to Zone 3, even though the data establishes the impropriety of this comparison.

The FWS must also examine new and existing information concerning the impacts of Washington County's proposal to allow development and other covered uses to permanently destroy 200 acres of occupied habitat within the Red Cliffs Desert Reserve. This, too, represents an expansion of incidental take and habitat destruction beyond what was approved under the 1995 HCP.

In light of the additional "take" requested under the 2020 HCP – including by undercounting prior take of Mojave desert tortoise, assigning take only to tortoise adults and ignoring take of juvenile and hatchlings, artificially inflating permissible acreage of occupied habitat subject to incidental take, and allowing an additional take of 200 acres within the Desert Reserve otherwise – the FWS should examine and discuss whether maintaining or bolstering the protections on Federal and non-Federal lands within Zone 6 – as currently required under the 2020 HCP and Implementation Agreement – may offset the impacts of this additional requested take. We urge the protection of Zone 6 as additional habitat necessary in maintaining and recovering the tortoise, which is on an extinction trajectory and faces increased fire risk due to climate change, population growth, and surging invasive plants – especially in light of the increased take sought under the 2020 HCP. In light of the additional take requested under the 2020 HCP and ITP application, the FWS must fully offset the impacts of this increased take authorization on Mojave desert tortoise and its habitat.

LWCF and Section 6 Lands

Purposes Behind LWCF Acquisition. BLM's granting of a ROW along the UDOT's Route Alignment, the T-Bone Mesa Alignment, or the Southern Alignment will violate the Land and Water Conservation Fund Act and the Administrative Procedure Act. Congress passed the Land and Water Conservation Fund Act (P.L. 88-578) on September 3, 1964, and the LWCF became law on January 1, 1965. The purposes of the LWCF are:

to assist in preserving, developing, and assuring accessibility to all citizens . . . such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation in such recreation and to strengthen the health and vitality of the citizens of the United States by (1) providing funds for and authorizing Federal assistance to the States in planning, acquisition, and development of needed land and water areas and facilities and (2) providing funds for the Federal acquisition and development of certain lands and other areas. P.L. 88-578.

The LWCF consists of a state-side and a federal-side acquisition program. The state-side program provides matching grants to the States and local governments for the acquisition and development of public parks, outdoor recreation areas and facilities. 54 U.S.C. § 200305. The Secretary of the Interior apportions the appropriation for state grants in accordance with a formula set out in the LWCF Act. *Id.* § 200305(b). Under this formula, a portion of the appropriation is to be divided equally among the states, and the remaining appropriation is to be apportioned based on need, as determined by the Secretary. Acquisitions funded through LWCF state grants must remain in recreation use in perpetuity, unless the Secretary of the Interior approves of the conversion of the land to another use and acceptable replacement lands are substituted. *Id.* § 200305(f)(3).

LWCF's federal-side acquisition program represents the principal source of funds for federal acquisition of land. *Id.* § 200306. The LWCF Act provides that "unless otherwise allotted in the appropriation Act making them available," appropriations from the fund for federal purposes are to be allotted by the President for certain activities. *Id.* § 200306(a)(1). These activities include land acquisition in recreation areas administered by the Secretary of the Interior for recreational purposes; land acquisition in national park, national forest, and national wildlife refuge system units; and land acquisitions for endangered and threatened species. *Id.* In practice, the appropriations acts specify the federal purposes for which the funds are to be used.

Importantly, lands and interests in lands acquired through LWCF's federal-side acquisition program must remain in Federal ownership, and – unlike the state-side program – lands acquired through the federal-side program may not be converted to other non-recreational and non-conservation uses. *Compare id.* § 200305(f)(3) (explicitly permitting conversion of state-side acquisitions) *with id.* § 200306 (federal-side program).

The Draft SEIS identifies three new parcels of LWCF lands acquired in the NCA since the FEIS. Two of the parcels, Parcel 6601-A (53.3 acres) and Parcel 6810-D-30 (11 acres) were federal-side acquisitions, while Parcel 6810-D-32 (23 acres) was a state-side acquisition. Draft SEIS at 62. The Draft SEIS acknowledges that significant portions of both the federal-side Parcel 6810-D-30 and the state-side Parcel 6810-D-32 will be encumbered within the 500-foot-wide ROW corridor under the UDOT's Route Alignment alternative. The T-Bone Mesa Alignment would encumber a portion of the federal-side Parcel 6601, and the Southern Alignment would encumber more than 80% of the federal-side Parcel 6810-D-30 and a portion of the state-side Parcel 6810-D-32. Draft SEIS at 64, Figure 10. As noted above, the LWCF Act prohibits conversion of lands acquired through the LWCF federal-side program to a highway ROW, while conversion of lands acquired through the state-side program can be converted to a non-recreation use under certain circumstances.

In the previous DEIS, the Agencies turned the LWCF Act on its head by claiming that only the state-side program has a so-called "anti-conversion requirement." DEIS at 3-135 –

3-136 ("No [land acquired through the state-side program] may be wholly or partially converted to a use other than public outdoor recreation uses(s) without the approval of the National Park Service. These anti-conversion requirements do not apply to the Federal side of the LWCF."). The Agencies do not repeat this claim directly in the Draft SEIS, but it seems that they continue to adhere to it, as the two federal-side acquisitions are analyzed only for direct impacts associated with encumbrance, while the state-side acquisition is analyzed for additional impacts that include whether the state-side LWCF parcel would be wholly or partially converted to a non-conforming use. See DEIS at 62.

Under the Agencies' reading of the LWCF Act, the federal land management agencies (BLM, National Park Service, U.S. Forest Service, and the U.S. Fish and Wildlife Service) are free to acquire lands for wildlife habitat, outdoor recreation and other conservation uses using the LWCF federal-side program, and then permit these lands to be used for non-conservation, industrial or commercial uses. This interpretation is directly at odds with the purposes of the Land and Water Conservation Fund Act, federal appropriation law, and common canons of statutory construction.

First, the stated purposes of the LWCF Act are to "to assist in preserving, developing, and assuring accessibility to all citizens of the United States of America of present and future generations and visitors who are lawfully present within the boundaries of the United States of America such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation in such recreation and to strengthen the health and vitality of the citizens of the United States by (1) providing funds for and authorizing Federal assistance to the States in planning, acquisition, and development of needed land and water areas and facilities and (2) providing funds for the Federal acquisition and development of certain lands and other areas. P.L. 88-578 (Sept. 3, 1964).

The only court that has reviewed post-acquisition management of lands acquired using LWCF funding has held the "primary purposes for which the lands were acquired controls not just the initial acquisition of the lands, but the manner of their development post-acquisition." *Gifford Pinchot Task Force v. Perez*, No. 03:13-cv-00810-HZ, 2014 WL 3019165 at *10 (D. Or. July 3, 2014). According to this court, "any other construction . . . would render the LWCF Act meaningless . . ." *Id.* at 11. In specifically rejecting the Forest Service's argument that the LWCF Act placed no limitations on a federal agency's management of lands acquired using LWCF funds, the Court noted, "[i]f [the Forest Service] prevailed on [its] argument, the subsequent development of land purchased under the LWCF Act could completed undermine the Congressionally stated primary purpose for the purchase of such land, rendering it meaningless. Such an argument is unsupported." *Id.* at 12.

When BLM acquires land using funds Congress appropriated to the LWCF, the LWCF's allowable purposes for a land acquisition become binding on the agency. See 31 U.S.C. § 1301(a) (opening statement of Chapter 13 of the U.S. Code, dealing with appropriations). "Appropriations shall be applied only to the objects for which the appropriations were made except as otherwise provided by law." *Id.* "31 U.S.C. § 1301 requires that funds be spent for the purpose for which they were appropriated by Congress." *Dep't of Soc. Servs. of State of Cal. v. Sullivan*, 904 F.2d 710 (9th Cir. 1990). "Simply stated, 31 U.S.C. § 1301(a) says that public funds may be used only for the purpose for which they were appropriated." (General Accounting Office, 2004). Thus, BLM cannot appropriate funds for the acquisition of lands to benefit the conservation of Mojave desert tortoise, outdoor recreation and other

conservation purposes, and then develop and manage these acquired lands in a manner inconsistent with the initial purpose.

Finally, Congress has shown a willingness—in limited circumstances and only after an exhaustive process—to exempt state-side acquisitions from subsequent management limitations inconsistent with the underlying purposes of the initial appropriation. Congress has chosen not to apply this exemption to the federal-side of LWCF, however, and BLM is not free to manipulate the LWCF Act to undermine the purposes of the LWCF Act for federal-side acquisitions. Indeed, “where Congress includes particular language in one section of a statute but omits it in another . . . , it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.” *Keene Corp. v. United States*, 508 U.S. 200, 208 (1993) (quoting *Russello v. United States*, 464 U.S. 16, 23 (1983)).

For these reasons, BLM may not grant a ROW authorization across any lands that have been acquired using Land and Water Conservation Funds.

Unexamined Impacts of ROWs on LWCF Acquisitions. BLM has arbitrarily failed to examine the direct, indirect and cumulative impacts of the proposed ROW alternatives on the purposes for which the lands were acquired. The Draft SEIS does not discuss in any detail the purposes for which Parcels 6601-A, Parcel 6810-D-30, and Parcel 6810-D-32 were acquired. Rather, the Draft SEIS generically states that “[a]cquisition of non-Federal land in Washington County conforms to management direction and decisions in the Red Cliffs NCA RMP, as amended, which prioritizes acquisitions of NCA inholdings containing Mojave desert tortoise habitat.” Draft SEIS at 62. In establishing the NCA, Congress directed that it be managed “in a manner that conserves, protects, and enhances” its resources. P. L. 111-11 § 1974(e), codified at 16 U.S.C. § 460www(e). The Draft SEIS does not analyze whether UDOT’s Route Alignment, or any of the other alternatives, comply with the purposes of acquiring desert tortoise habitat or conserving, protecting and enhancing NCA resources.

Instead, the Agencies consider the direct impacts to be only the amount of acreage that would be encumbered within a 500-foot corridor alignment. Draft SEIS at 62-64. There are two problems with this analysis. First, BLM cannot limit it only to direct encroachment, and, instead, must fully consider the direct and indirect impacts of constructing a new route, including the potential impacts on the conservation, protection, and enhancement values for which the lands were acquired. As noted above, these values include wildlife habitat for desert tortoise and other wildlife, open space, and aesthetic and recreational values.

The Agencies also cannot arbitrarily limit their analysis to only the area of direct impact. Instead, they must identify an appropriate analysis area that captures both direct and indirect impacts of the alternatives. This is especially true here since elsewhere in the Draft SEIS and in the FEIS, the Agencies acknowledge that road construction is known to adversely impact MDT populations and habitat up to 4.6 kilometers from the edge of the roadway. Applying this broader area of impact, as illustrated below, the potential impacts of the UDOT’s Route Alignment extends far beyond its immediate footprint, and NEPA requires examination of these impacts. The Agencies’ failure to examine the impacts of the UDOT’s Route Alignment on these lands violates NEPA.

LWCF and Section 6 Lands Cumulative Impacts

In the 2020 FEIS Summary for the Land and Water Conservation Fund Lands Cumulative Impacts section, the Agencies repeat the claim that “land tenure acquisitions and land use

authorizations would offset some of the loss from Federal LWCF impacts by incorporating private in-holdings into the NCA.” Draft SEIS at 87. This fails to acknowledge that the Land and Water Conservation Fund Act, federal appropriation law, and common canons of statutory construction make it impermissible for BLM to authorize uses that impact federal-side LWCF acquisitions. Further, there is no analysis of whether each of the reasonably foreseeable future projects or actions in Table 26 is reasonably likely to take place under all alternatives and there is no reason to presume that is the case—the need and feasibility of road construction projects and residential developments are often dependent on the route or location of highway projects. In the final SEIS, BLM must update its analysis to adequately discuss the cumulative impacts as to each alternative as well as acknowledge the unlawfulness of allowing a ROW through federally-acquired LWCF land.

Mojave Desert Tortoise

Despite being listed on the Endangered Species Act for three decades, the Mojave desert tortoise continues to decline. Allison and McLuckie (2018) estimated that the adult population declined by 37% between 2004 and 2014. Main drivers include habitat loss, degradation, and fragmentation (e.g., commercial and residential development, energy development, rights-of-way, roads, recreation); stochastic events (e.g., fire, drought); invasive species (whose spread is facilitated by wildfire); and climate change. The Mojave desert tortoise requires unfragmented patches of high-quality habitat that are sufficiently large to provide for genetic dispersal and stochastic events (Draft SEIS at 51; USFWS 2021). “Because desert tortoises occupy large home ranges, the long-term persistence of extensive, unfragmented habitats is essential for the survival of the species. The loss or degradation of these habitats to urbanization, habitat conversion from frequent wildfire, or other landscape-modifying activities place the desert tortoise at increased risk of extirpation.” (USFWS 2011).

In the Mojave Desert Tortoise Recovery Plan, the FWS delineated five recovery units, each of which is essential to the long-term viability of the Mojave desert tortoise.⁷ The Upper Virgin River Recovery Unit (UVRU) is the smallest and most fragmented of the recovery units. It includes all designated Critical Habitat and other suitable habitats for the Mojave desert tortoise east of the Beaver Dam Mountains in Washington County, Utah and contiguous habitat in Mohave County, Arizona. It contains one Tortoise Conservation Area (TCA)—the Red Cliffs Desert Reserve—which overlaps with the Red Cliffs National Conservation Area. Three of the proposed highway corridor options (T-bone Mesa alignment, UDOT ROW alignment, and Southern alignment) are within Zone 3 of the Desert Reserve. .

The adult desert tortoise density estimates for the Reserve and the UVRU have been consistently the highest observed across the range of the Mojave desert tortoise. Across the range of the species, adult desert tortoise density estimates derived from distance sampling surveys implemented in TCAs between 1999 and 2023 ranged between 0.2 to 34.3 tortoises

⁷ USFWS 2011 at 41 and USFWS 2021 at 8 (“USFWS determined each of the five recovery units are individually necessary to conserve the genetic, behavioral, morphological, and ecological diversity necessary for long-term sustainability of the entire listed population (USFWS 2011).”).

per square kilometer (Tuma, 2024) ([Attachment C](#), Table 1). While the population densities are relatively high, they are still declining; population estimates (2004-2014) showed that population densities in the UVRU are declining at a rate of approximately 3.2% per year.⁸

Abundance estimates also indicate population declines in the Desert Reserve. The estimated abundance of adult desert tortoises declined from an estimated 3,482 in 1999 to an estimated 2,425 in 2023, an estimated loss of 1,057 (-30%; UDNR 2024). Zone 3 abundances have declined 8% between 2017 and 2023. Draft SEIS at 46. USFWS (2021) concluded that “If population growth rates (lambdas, proportional change in abundance from one year to the next) are below 98 percent on average, no population size is large enough for persistence to 390 to 500 years (15 to 20 generations).”

Red Cliffs Desert Reserve populations appear to remain relatively stable until a major stochastic event (drought, fire) occurs, which drops populations suddenly. “During the first several years of monitoring (1998 to 2001), tortoise densities were consistently high; however, following stochastic events, including drought (e.g., 2002) and wildfire (e.g., 2005, 2020), tortoise densities decreased over 50%, from an estimated 3,409 adult tortoises in 2001 to 1,681 adults by 2023 (UDWR 2024).” See also Draft SEIS Figure 8. This points to the importance of preventing wildfires and managing habitats for resistance and resilience.

Zone 3 of the Desert Reserve is the location of three proposed alternatives for the Northern Corridor ROW. It is designated critical habitat and contains some of the most dense populations of the Mojave desert tortoise rangewide and in the UVRU – including those in the unburned, southern portion where the Northern Corridor alignments are located. Draft SEIS at 47. In 2023, Utah Division of Wildlife Resources estimated that there were 1,681 tortoises within Zone 3 at a density of 17.5 tortoises/square km.⁹ Within Zone 3, Mojave desert tortoises are not distributed evenly, but instead are found in clusters as shown in Figure 7 of the Draft SEIS. Of the highest density clusters, all but one – the one located where the Northern Corridor is proposed under the three alignments – have burned at least once in the last three decades. Draft SEIS Figure 7.

The small size and fragmented condition of the UVRU makes it more vulnerable to stochastic events and habitat loss. “While the UVRU hosts a higher density of adult Mojave desert tortoises than any other Mojave desert tortoise conservation area (Berry and Murphy 2019), the small geographic size of the Reserve and UVRU increases the vulnerability of the population. Therefore, the long-term survival and population viability of Mojave desert tortoises in the UVRU and Reserve will depend upon the reduction, avoidance, and

⁸ This rate of decline is lower than that estimated for other recovery units across the range, including Colorado Desert (4.5%), Eastern Mojave (11.2%), and Western Mojave (7.1%) (Allison and McLuckie 2018). Draft SEIS at 50-51.

⁹ These are adjusted abundance and density figures. USFWS estimated 1,614 tortoises at a density of 10.1 tortoises/sq. km. UDWR applies a correction to account for tortoises that are likely not observed (e.g., in burrows).

mitigation of primary threats to the species.” Draft SEIS at 51.¹⁰ In other words, the protection of the Desert Reserve – and its dense populations and intact habitats in Zone 3 – is essential for the recovery of the Mojave desert tortoise.

Protecting and connecting habitat is emphasized in the USFWS 2011 revised recovery plan. Connectivity within and between recovery units enables migration of individuals among recovery units in the event of catastrophic loss in one recovery unit (or portion of one). Recent studies have found evidence of loss of localized genetic diversity due to habitat fragmentation, likely resulting from population isolation caused by factors that include anthropogenic impacts such as interstate highways (Latch et al. 2011, Dutcher et al. 2020). USFWS (2021) emphasizes the importance of connectivity stating that “Habitat connectivity within and among [analysis units] is a key component to supporting the resilience of the UVR recovery unit and its ability to support populations and maintain gene flow with the adjacent Northeastern Mojave Recovery Unit. Protecting connectivity within the UVRRU is necessary to ensure its recovery potential and preserving the potential for natural repopulation of areas impacted by catastrophic stochastic events such as wildfire. Climate change is likely to amplify stressors, elevating the importance of maintaining connectivity with higher elevation habitat which will become more suitable for desert tortoises as ambient temperatures increase.”¹¹

The Red Cliffs Desert Reserve and the UVRRU populations and habitats are essential for the long-term survival of the Mojave desert tortoise for several reasons. First, the Red Cliffs Desert Reserve has a high population density compared to other TCAs in the range. The higher densities in the UVRRU likely provide a source of desert tortoises and genes to the adjacent Northeastern Mojave Recovery Unit (NMRU), which contains four TCAs: Beaver Dam Slope, Gold Butte-Pakoon, Mormon Mesa, and Coyote Springs. The high population density of Mojave desert tortoises in the UVRRU also has importance for providing individuals and genes as they disperse outside of their current range in response to climate change (see below). It will be very important to maintain core populations within TCAs to ensure long-term survival of the species (e.g., USFWS 2021). See [Attachment C](#) (Tuma, 2024).

Second, the Mojave desert tortoise populations in the UVRRU (which are cored by those in the Reserve and Zone 3) represents the northeastern-most core population in the species’

¹⁰ See also USFWS (2021) (“A high priority is maintaining and improving habitat conditions in the East and West Cottonwood AUs which are located in Zone 3. Sustaining population numbers in West and East Cottonwood AUs and promoting resilience to stochastic events continues to be a conservation effort priority as well as promoting connectivity among other larger AUs.”)

¹¹ Fencing highways and building culverts has been used to mitigate the barrier to movement caused by highways. However, the efficacy of these structures for increasing genetic permeability is unproven. Draft SEIS at 42. In addition, fencing can have adverse consequences to tortoises (Peaden et al. 2017) – for instance, fencing can result in desert tortoises pacing, and they will continue to pace a new fence line to access burrows or sites within their home range, sometimes to the point of exhaustion or overheating. Pacing can thus result in desert tortoises becoming stressed and even death from heat exposure if temperatures are above 95°F.

range and a leading-edge population for expansion in response to climate change. Climate change scenarios indicate that Mojave desert tortoise habitats in the southern and western portions of its range will become unsuitable in the coming decades, and that areas to the north and east of the species' current range will become suitable climate refugia (Sinervo 2014). Mojave desert tortoise populations in the UVRU therefore may be very important for the long-term persistence of the species in the face of climate change and an important refugia for the species as climate change progresses and trailing-edge populations contract or decline. Further, the population contains genes that are locally adapted for ecological conditions encountered in the northeastern periphery of the species' range, providing the best source of genes for expansion into new areas. See [Attachment C](#) (Tuma, 2024).

Under the Endangered Species Act, BLM is obligated to ensure that its action will not jeopardize the Mojave desert tortoise or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). Destruction or adverse modification "means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species." 50 C.F.R. § 402.02. "Jeopardy" results when it is reasonable to expect that the action, directly or indirectly, would "reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. The proposed Northern Corridor Highway will destroy or adversely modify critical habitat in violation of 16 U.S.C. § 1536(a)(2). While the Northern Corridor Highway cuts across one portion of the critical habitat within the UVRU, based on the supplemental information provided in this letter and the information provided in our previously submitted comments,¹² there is a high likelihood that it will be the action that commits the UVRU to a sub-functional condition and precludes Mojave desert tortoise recovery within the UVRU and rangewide. Similarly, because diminishment of the Mojave desert tortoise population and habitat within the UVRU may be the tipping point precluding recovery, the proposed Northern Corridor Highway jeopardizes the Mojave desert tortoise species as a whole.

BLM's Special Status Species Manual 6840 obligates BLM to conserve and/or recover threatened or endangered species and the ecosystems on which they depend by, among other things, ensuring that BLM actions are not likely to jeopardize the continued existence of any endangered species or threatened species or destroy or adversely modify designated critical habitat. Sections .06, .1(E). BLM also has an obligation to "to prevent unnecessary or undue degradation of [public] lands," 43 U.S.C. § 1732(b) and 43 CFR § 6101.1, 6101.2, 6101.3. BLM must also comply with its duty under the Omnibus Public Lands Management Act of 2009 "to conserve, protect, and enhance" the ecological, scenic, wildlife, and natural resources of the Red Cliffs NCA, including protection of threatened and endangered species, 16 U.S.C. § 460www(a), and to prohibit all land uses that are inconsistent with these purposes of the NCA. 16 U.S.C. § 460www(e)(1)-(2). Authorizing a highway through dense populations of Mojave desert tortoise – populations that are critical to future range expansions, genetic connectivity, redundancy, and representation -- within an already highly

¹² See Red Cliffs Conservation Coalition Comments on the Northern Corridor Draft Environmental Impact Statement and Related Management Plans at 115-119 (submitted Sept. 10, 2020) ([Attachment A](#)).

fragmented and vulnerable recovery unit is inconsistent with Manual 6840, violates the Omnibus Public Lands Management Act of 2009 and will result in unnecessary or undue degradation. Thus, BLM's statutory, regulatory, and policy obligations demand that BLM protect Zone 3 habitat from further disturbance and terminate UDOT's ROW.

BLM needs to bolster its impact analysis related to the Mojave desert tortoise. First, BLM needs to take a hard look at how climate change will force extensions and shifts in the Mojave desert tortoise range, the importance of the UVRU and Zone 3 population as a refugia and source population for these shifts, and how losses in Mojave desert tortoise populations in Zone 3 might affect how well the UVRU can serve as a refuge and source populations for range shifts. [Attachment C](#) (Tuma, 2024) provides more information on this topic.

Second, BLM needs to justify the choice of a 508-meter swath as the zone in which Mojave desert tortoise will be impacted (directly or indirectly) by a northern corridor highway and show its work for Table 9 (which estimates the number of adult Mojave desert tortoise that will be affected under each of the alternatives). As we discussed in our previous comments, impacts to Mojave desert tortoise from roads have been shown to exceed 508 meters.¹³ Further, we know that wildfires are more likely to start along roads and invasive species are more likely to occur in proximity to roads and in burned areas (both discussed elsewhere in these comments). Both fires and invasive species can extend beyond 508 meters from the center of the ROW resulting in indirect impacts and mortality to Mojave desert tortoise. Thus, the 508-meter effect zone is too small as are the estimates for adult tortoises affected by the Northern Corridor alternatives in Table 9. Also, BLM is not including juvenile Mojave desert tortoise in its calculations in Table 9 and does not discuss the impacts of the Northern Corridor Highway alignments on juveniles which results in even further underestimation of impacts to Mojave desert tortoise.

Finally, BLM states that "Permanently modified habitat, loss of areas with concentrated tortoise use, and habitat fragmentation may result in long-term consequences to the conservation of the Mojave desert tortoise." Draft SEIS at 51. Yet, BLM does not then explain or attempt to quantify what these long-term consequences will be. BLM must take a hard look at how habitat loss and fragmentation from the Northern Corridor highway alignments will affect the short, medium, and long-term viability of the Mojave desert tortoise including its capacity to adapt to climate change. BLM should rectify these deficiencies in the final supplemental EIS.

Mojave Desert Tortoise Cumulative Impacts

The final EIS must better analyze the proposed action's cumulative impacts, defined as "the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft

¹³ Red Cliffs Conservation Coalition Comments on the Northern Corridor Draft Environmental Impact Statement and Related Management Plans at at 29-30, 96-97, 155-159, and 267.

SEIS listing potential future projects, with terse descriptions, does not constitute an adequate cumulative impacts analysis.

The Draft SEIS at 86 establishes the cumulative impact analysis area for Mojave desert tortoise as potential and suitable modeled desert tortoise habitat (up to 4,500-foot elevation) in Washington County (excluding the Northeastern Mojave Recovery Unit). However, because Mojave desert tortoise's viability hinges on connectivity and genetic mixing across the range, the cumulative impact analysis area should be the Mojave desert tortoise range and should include all the past, present, and reasonably foreseeable projects (e.g., solar and transmission) that affect the viability of recovery units especially the UVRU and those directly proximal to the UVRU.

According to USFWS (2022, at 15), Landsat imagery shows that about 163,742 acres of habitat were lost between 2005 and 2017. Also, large areas of desert tortoise habitat have been developed or approved for development for utility-scale solar energy. These developments would result in the loss of approximately 74,000 acres of desert tortoise habitat and more is anticipated. USFWS also cites several major developments on military bases within desert tortoise habitat that have occurred or are planned (see USFWS 2021 at 18). BLM must account for these projects and resulting losses of tortoise habitat within its cumulative impact analysis.

Noxious Weeds and Invasive Species

Section 3.2 in both the Draft SEIS and 2020 FEIS discusses the potential impacts of each action alternative for the Northern Corridor Highway on vegetative communities, including noxious weeds and invasive plant species. While the Draft SEIS largely relies on the analysis in the 2020 FEIS for impacts to native vegetation, the supplemental analysis focuses on the introduction and spread of noxious weeds and invasive species following fire, road construction, and other disturbances, including several human-caused fires within the Red Cliffs NCA and Red Cliffs Desert Reserve that the 2020 FEIS did not address.

The Draft SEIS concludes that the UDOT ROW Alignment, T-Bone Mesa Alignment, and Southern Alignment all would have substantial adverse impacts on native vegetative communities and the spread of noxious and invasive plant species within the NCA and Reserve. On the other hand, the Draft SEIS concludes that the Red Hills Parkway Expressway and St. George Boulevard/100 South One-Way Couplet alternatives would have relatively few such impacts, if any.¹⁴ As discussed below, the facts, science, and law all favor these latter alternatives.

Tortoise experts consider wildfire and invasive plants as the top two threats to Mojave desert tortoise in the Upper Virgin River Recovery Unit (USFWS, 2021). Because invasive plants serve as fuel for fires and fires increase the spread of invasive plants, a process known as the grass/fire cycle, these two threats are closely related and require an integrated management approach to reduce the potentially devastating impacts on desert tortoise populations. Our comments above on fire and fuels management are therefore incorporated here by reference.

¹⁴ 2024 Draft SEIS Section 3.2.2; 2020 FEIS Sections 3.2.2.3, 3.2.2.4, and 3.2.2.5.

Invasive plant species significantly impact ecosystem structure and function and fire regimes in the Mojave Desert (Drake et al., 2016). Invasive plants impair tortoise habitat by effectively competing with native plants for water and soil nitrogen, inhibiting the germination of native plants, and altering the fuel structure and behavior of fire (Klinger & Brooks, 2017; Brooks & Esque, 2002). In the Mojave Desert, invasive annual grasses are widely regarded as the most significant causative factor for the increase in fire frequency and total area burned over the last several decades (Underwood et al., 2019). Non-native plant species are known to alter fire regimes through a grass/fire cycle in which burned areas tend to be filled in with exotic grasses that then serve as fuel for future fires that burn more frequently and across larger areas than previous fires (USFWS, 2021; Underwood et al., 2019; Fusco et al., 2019; Klinger & Brooks, 2017). Invasive plants typically predominate near roads and other areas of human activity and urbanization, bringing additional ignition sources in proximity to the abundant fuel loads offered by invasive plants and further perpetuating the grass/fire cycle (Smith et al., 2023; Drake et al., 2015; Seabloom et al., 2006; Brooks & Esque, 2002).

Historically, native plant species in the Mojave Desert were widely spaced with little intervening fine vegetative material to serve as fuel, so large or frequent wildfires were rare and native plants did not develop fire-resistant characteristics that allow them to re-establish following recurrent fires (Klinger & Brooks, 2017; Hood & Miller, 2007; Brooks & Esque, 2002). Repeat fires in the same area also create conditions that favor invasive plant communities over native communities (Stanton et al., 2023; Klinger & Brooks, 2017; Brooks & Esque, 2002). As few as two burns can reduce soil organic nitrogen, microbial biomass, and nitrogen availability that increases the carbon/nitrogen ratio (Stanton et al., 2023) and alters habitat structure and plant species composition, density, and native plant cover, including the native plants preferred by foraging tortoises (USFWS, 2021; Brooks & Esque, 2002). And compared to single-burn sites, multiple-burn sites exhibit an increase in herbaceous plant cover (typically composed of invasives) and a decrease in native woody plant cover such as creosote (Klinger & Brooks, 2017; Drake et al., 2015). While the Draft SEIS suggests that additional fires within previously burned areas, including the 2020 fires, will have negligible effects because noxious weeds and invasive plant species are already abundant in those areas, this ignores the impacts on native species and their general inability to recover from multiple burns. It also contradicts the supplemental analysis regarding fire and fuels management in Section 3.4.2 of the Draft SEIS, which explicitly recognizes the ecological threats of an increased fire cycle and notes that native shrubs “have little chance of recovery within areas burned multiple times in a 20-year period.”

The loss of native shrubs and forbs due to competition with invasive plants and recurring fires is devastating to desert tortoise habitat, health, and survival. Creosote, bursage, globemallow, and other desert plants provide tortoises with protective canopies from predators and heat (Drake et al., 2015; Hood & Miller, 2007; Brooks & Esque, 2002), and tortoises often incorporate the root structures of these plants into their burrows (Hood & Miller, 2007). Native plants also provide desert tortoises with important nutrition benefits. Tortoises are herbivorous and highly selective in their choice of plant foods (Jennings & Berry, 2023; USFWS, 2021; Drake et al., 2016). In undisturbed habitat, tortoise diets largely consist of native annual forbs, grasses, and herbaceous perennial shrubs that provide protein and amino acids, minerals, vitamins, water, and energy through carbohydrates and the fermentation of fiber (Drake et al., 2016). The nutrient-rich diet of desert tortoises bolsters immune systems, growth, egg production, and survival rates, among other key health benefits and functions (USFWS, 2021; Drake et al., 2016). While

desert tortoises are selective grazers, when native plants are unavailable they eat invasive plant species instead that lack sufficient nutrients and trace elements, resulting in adverse health effects like reduced growth, loss of immune function, and lower reproductive and survival rates (USFWS, 2021; Drake et al., 2017; Drake et al., 2016). In addition, the sharp-pointed florets of cheatgrass and red brome, common post-fire invasives in the Red Cliffs NCA and Reserve, can become lodged in the tortoise and cause mechanical injury to the mouth and jaw, particularly in younger animals (USFWS, 2021; Drake et al., 2015).

A 2014 mapping effort by LANDFIRE showed that the dominant vegetation group (68%) within the Red Cliffs NCA and Reserve is desert scrub—such as creosote, white bursage, saltbush, big sagebrush, yuccas, and blackbrush—and the second most common vegetation group (22%) is exotic invasive species—including annual bromes (cheatgrass and red brome), split grasses, and forbs such as tall tumble mustard, black mustard, and African mustard.¹⁵ Notably, all the areas impacted by fires in the last two decades, including the areas of the 2020 fires, are now infested with invasive grasses that continue to spread. The upper western portion of Zone 3 most impacted by fires, for example, is covered in a near solid layer of exotic annual and perennial grasses and forbs.¹⁶ Even though invasive plants (mostly cheatgrass) are also common in the lower western portion of Zone 3, to date this area is mostly unburned and significant communities of native creosote, Mormon tea, blackbrush, broom snakeweed, Sandberg bluegrass, and big galleta remain intact.¹⁷ Given the importance of native vegetation to the Mojave desert tortoise and the devastating impacts of fire on tortoise habitat, it is unsurprising that the relative density of Mojave desert tortoise observed in the NCA and Reserve is highest in the southwestern portions of Zone 3 where UDOT seeks to build the Northern Corridor Highway.¹⁸

The Draft SEIS recognizes that the UDOT ROW Alignment, T-Bone Mesa Alignment, and Southern Alignment all would involve major ground disturbances during highway construction and, when completed, introduce vehicular traffic and additional human activities to the Red Cliffs NCA and Reserve. Vehicles and human activities are known vectors for the introduction and spread of noxious weeds and invasive plant species and for additional ignition sources that would significantly increase the likelihood of fires. Moreover, all three alignments would cross the lower western portion of Zone 3 that, to date, remains unburned and contains significant communities of native vegetation that are critical to the health and survival of the Mojave desert tortoise. A four-lane highway through the heart of this high-density tortoise area would all but ensure future fires, kicking off a grass/fire cycle that will eventually eradicate native plants in Zone 3 and create a perennial cover of invasive grasses that is unsuitable as tortoise habitat.

BLM must give strong consideration to the irreversible impacts on native vegetative communities and the spread of invasive plants when selecting its final alternative, consistent with its duty under FLPMA “to prevent unnecessary or undue degradation of [public] lands,” 43 U.S.C. § 1732(b). BLM must also comply with its duty under the Omnibus Public Lands Management Act of 2009 “to conserve, protect, and enhance” the ecological, scenic, wildlife,

¹⁵ 2020 FEIS Section 3.2.1.1 & Map 3.2-3.

¹⁶ 2020 FEIS Maps 3.2-3 & 3.22-1; 2024 Draft SEIS Sections 3.2.1 & 3.2.4 (Figure 4).

¹⁷ 2024 Draft SEIS Sections 3.2.1 & 3.2.4 (Figure 4).

¹⁸ 2024 Draft SEIS Section 3.5.2 (Figure 7).

and natural resources of the Red Cliffs NCA, including protection of threatened and endangered species, 16 U.S.C. § 460www(a), and to prohibit all land uses that are inconsistent with these purposes of the NCA. 16 U.S.C. § 460www(e)(1)–(2). To comply with its statutory duties and satisfy the purpose and need for this action, BLM should terminate UDOT’s ROW and focus on either the Red Cliffs Parkway Expressway alternative or St. George Boulevard/100 South One-Way Couplet alternative.

According to the Draft SEIS, the Red Hills Parkway Expressway alternative would have “substantially fewer impacts” on native vegetation and the spread of noxious weeds and invasive species compared to the highway alignments through the Red Cliffs NCA and Reserve, and the St. George Boulevard/100 South One-Way Couplet alternative would have “no new impacts.” Although the Draft SEIS notes that the selection of either of these alternatives would eliminate the management prescriptions for non-federal lands in Zone 6 that were triggered by BLM’s previous grant of the UDOT ROW, as explained below the FEIS should not give much weight, if any, to the potential management changes in Zone 6.

The Draft SEIS states that invasive plant species are over 50% less abundant in Zone 6 than in the Red Cliffs Reserve, but a comparison between all of Zone 6 and the entire Reserve is not useful and appears to be based on the 2014 LANDFIRE assessment that is somewhat outdated. To truly understand relative impacts, any comparison between Zone 6 and the Reserve should be based on current data and be between the affected areas. In other words, a comparison of invasive species on non-federal lands in Zone 6 (where management prescriptions would change) and the southwestern portion of Zone 3 (where the highway alignments are located) is a better approach. The southwestern portion of Zone 3 remains unburned and, as a result, native plant cover is higher there than previously burned areas elsewhere in Zone 3 and the Reserve. Also, the non-federal lands in Zone 6 generally fall within or near the wildland-urban interface and are not subject to the stricter management prescriptions that apply to the Red Bluff ACEC and other BLM lands within Zone 6. This suggests that invasive plants may be more prevalent on the non-federal lands in Zone 6 and a change in management prescriptions may not have much impact.

Noxious Weeds and Invasive Species Cumulative Impacts

As previously stated, the FEIS must better analyze the proposed action’s cumulative impacts, defined as “the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft SEIS listing potential future projects, with terse descriptions, does not constitute an adequate cumulative impacts analysis.

Socioeconomics

The Draft SEIS refers to the socioeconomic effects outlined in the 2020 EIS and outlines some changes based on land transfers and demographic changes that have occurred since it was published. Updates were made to the acreage of property that would be encumbered by each of the alternatives (draft SEIS, p. 79), which is significantly smaller for the Red Hills Parkway and One-way-couplet alternatives than for alternatives within the NCA.

The Draft SEIS restates that:

“under the No Action Alternative, congestion on existing roadways in the St. George area would continue to increase. This may cause longer travel times, increased vehicle emissions, and increased noise. This could discourage residents from traveling to shopping centers and result in losses of sales and tax revenue. Under each of the three ROW alignments within the NCA (T-Bone Mesa, UDOT Application, and Southern Alignments) properties would be encumbered” (Draft SEIS, 78f.).

Additional socioeconomic factors listed in this section (draft SEIS, 78f.) are:

- Increases in traffic and noise for neighborhoods adjacent to the proposed highway route.
- Mitigation of traffic elsewhere due to the presence of an alternative route.
- Effects on residential property values due to changes in the aesthetic features of the Reserve.
- Restricted livestock grazing in Zone 6 and induced growth to undeveloped areas.
- Negative economic effects on local businesses (one-way Couplet).

However, some key socioeconomic factors are missing from the Draft SEIS—many of which show an increased socioeconomic cost of the highway alternatives inside the NCA—and some stated factors warrant further review and analysis. In the Final SEIS, BLM must also consider the following:

Noise. A qualitative noise analysis is insufficient. NEPA requires the agencies to consider the impacts of highway noise on the Red Cliffs NCA, desert tortoise, and surrounding communities. The noise data failed to show baseline conditions and are unverifiable because the agencies made no effort to determine the relevance, representation, and reliability of this data. We request that the agencies collect and consider supplemental baseline data on background noise levels and related noise impacts of the highway alternatives through Red Cliffs NCA. In order to adequately analyze the true impacts of highway noise, the baseline data must include monitoring from within the undeveloped lands in the heart of the NCA and within desert tortoise designated critical habitat.

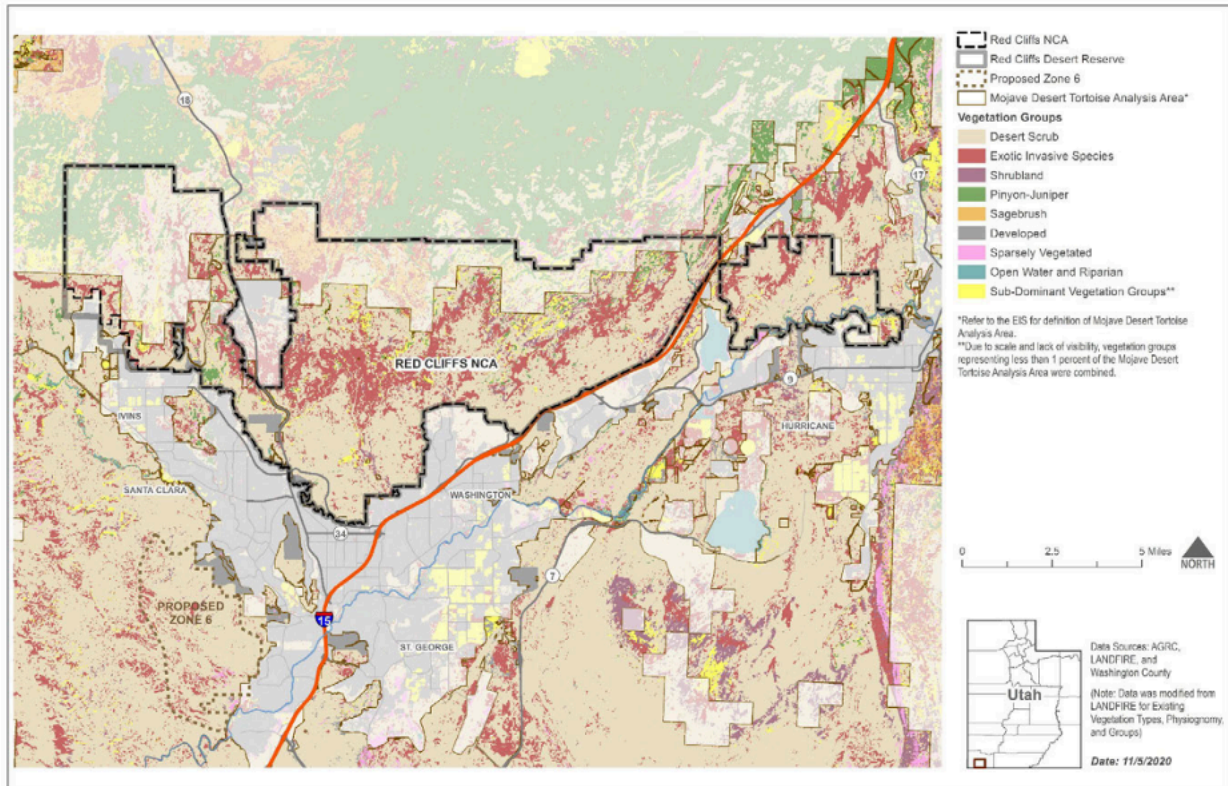
Wildfire Risk to Nearby Neighborhoods. BLM must update its wildfire analysis to include consideration of the impact wildfires would have on people living adjacent to the proposed UDOT ROW. The SEIS acknowledges that construction of the Northern Corridor on the UDOT ROW Alignment will lead to an increase in fire probability and fire frequency (24); that the Red Cliffs NCA may be capable of supporting fire return intervals as short as 5-10 years (29); and that previously burned areas are likely to burn again (29). However, the SEIS fails to consider the impact wildfires would have on neighborhood safety and resident well being.

Earlier material from the FEIS shows that portions of the Red Cliffs NCA within ¼ mile of Green Springs have experienced at least five wildfires since 1993 (Bureau of Land Management (BLM), 2020). The proliferation of invasive species in the area where the UDOT ROW would be granted is concerning. The high proportion of exotic invasive species here will lead to a concerning burn-reburn cycle if the ROW is granted.

The SEIS states that a consequence of granting the UDOT ROW is that construction activities may introduce even more noxious weeds and invasive species into the area than already exist (29). This phenomenon is clearly visible in the Dominant Vegetation Community Groups Map 3.2-3 from the FEIS ((Bureau of Land Management (BLM), 2020). Land on both sides of the Turkey Farm Road is dominated by exotic invasive species. It can

be expected that construction of the UDOT ROW would, in time, also lead to a monoculture of invasive species contributing to high risk for recurrent wildfires that could jeopardize the safety of nearby residents.

Map 3.2-3. Dominant Vegetation Community Groups within the Red Cliffs NCA



The agencies may also be vulnerable to lawsuits from future wildfires started as a result of the UDOT ROW which could destroy homes adjacent to the highway. Knowingly authorizing a highway that would increase fire probability and fire frequency near residential areas adjacent to the highway will create a legal complication for the agencies.

We request that the agencies consider the safety and wellbeing of residents adjacent to the UDOT ROW when selecting a highway alternative. BLM's selection for an alternative located outside of the Red Cliffs NCA would protect nearby neighborhoods from catastrophic wildfire and would be compatible with protecting the resource values for which the Red Cliffs NCA was established.

Roads as Firebreaks. We request that the agencies update their wildfire analysis to include consideration of the failure of roads to function as firebreaks. Under ideal conditions, roads may prevent the spread of fire. However, strong winds and the underlying drought conditions examined in the SEIS lead to large fires that can easily jump over roads and interstates. The UDOT ROW will fail to act as a firebreak and will fail to protect residents in Green Springs, Brio, Warm Springs and Middleton.

An examination of the spatial relationship of roads to wildfires by the Pacific Biodiversity Institute (Morrison, 2007) found that 88% of all wildfires nationwide are caused by humans. Of these human-caused wildfires, 95% occurred within ½ mile of a road. Over 90% of all

wildfires from all causes occurred within ½ mile of a road. There is an extremely significant relationship between fire occurrence and distance to the nearest road.

BLM must revoke the UDOT ROW because it will provide more access for human negligence and human-caused fires. BLM must not endanger the resource values which the Red Cliffs NCA was designated to protect, nor the lives of people living next door.

Travel times and vehicle emissions. The link between congestion and increased vehicle emissions made in these sections does not account for the phenomenon of induced demand and correlations between highway construction, vehicle miles traveled, and increased emissions, as outlined in our comments on transportation (Duranton & Turner, 2011).

Against common assertions that congestion increases emissions, fuel use has been shown to increase with a decrease in congestion, as driving becomes more convenient and vehicle miles traveled increase (Newman et al., 2017). Any measure that increases travel capacity without making driving more expensive in other ways has been found to attract new traffic that at least partially offsets the measure's effect on congestion (Hymel et al., 2010).

Loss of sales and tax revenue. The assertion that a no-build alternative could result in losses of sales and tax revenue because it could discourage residents from traveling to shopping centers is an assumption not rooted in empirical data. It does not take into account empirical evidence on responsive behavior associated with road construction (e.g.; (Bucsky & Juhász, 2022). Traffic demand modeling is based on evening peak hours (Bureau of Land Management (BLM), 2020, App. J-7), however road users have been shown to change routes or times of day of travel, hence adaptively responding to congestion during peak hours (Cortright, 2019; Sweet, 2011).

Furthermore, while studies on the economic cost of urban congestion show complex results depending on industries (see e.g. Sweet, 2011; Weisbrod & Fitzroy, 2011), longitudinal empirical research has found *positive* associations between congestion, GDP per capita and job growth overall (Marshall & Dumbaugh, 2020).

Loss of tourism revenue. We urge the BLM to consider that Washington County is a major destination for outdoor recreation in the State of Utah. The City of Saint George is the second most visited city in Utah after Salt Lake City (Utah Office of Tourism, 2022). A report by the Washington County Water Conservancy District (2019) highlights that:

“The natural beauty and significant recreational amenities of Washington County attracted over five million visitors in 2018. These visitors accounted for an estimated \$607 million of spending in area hotels, restaurants, shopping, gas stations, golf courses, tours and other businesses throughout the county.”

In 2022, visitors spent \$905.6 million in Washington County, and travel and tourism accounted for 8,802 jobs (Kem C. Gardner Policy Institute, 2024). Enhancing access to trails, parks, recreation, and open space is prioritized in both the draft general plan of the City of St. George (City of Saint George, 2022) and the draft Saint George Downtown Plan (City of Saint George, 2022).¹⁹

¹⁹ <https://2040.sqcity.org/nature.php>, <https://2040.sqcity.org/downtownplan/nature.php>

We urge the BLM to consider the negative long-term socioeconomic impact of the proposed alternatives through the NCA due to the destruction of recreation, cultural, scenic, and natural resources.

Socioeconomics Cumulative Impacts

The FEIS must better analyze the proposed action's cumulative impacts, defined as "the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft SEIS listing potential future projects, with terse descriptions, does not constitute an adequate cumulative impacts analysis.

Special Status Plants

Section 3.3 in both the Draft SEIS and 2020 FEIS discusses the potential impacts of each action alternative on special status plants that are listed as endangered or threatened under the ESA or listed as sensitive by BLM. The Draft SEIS largely relies on the analysis in the 2020 FEIS but provides a few minor updates for supplemental analysis. In total, three ESA-listed endangered plant species and three BLM sensitive plant species are known to occur in the Red Cliffs Reserve. The endangered plant species are dwarf bear poppy (Zone 6), Holmgren milkvetch (Zone 6), and Shivwits milkvetch (Zone 3), and the sensitive plant species are Jones indigobush (Zone 4), Parry's sandpaper plant (Zones 4 and 6), and Virgin thistle (Zone 3).

The Draft SEIS concludes that the UDOT ROW Alignment, T-Bone Mesa Alignment, and Southern Alignment would not impact any ESA-listed plant species because no such plants are known to exist near the path of the proposed highway in Zone 3. However, the UDOT ROW Alignment and Southern Alignment are likely to adversely impact the BLM sensitive Virgin thistle that is known to exist in the area of the proposed highway through Zone 3. And because Zone 6 would remain a part of the Reserve under all these alternatives, the Draft SEIS suggests this would benefit the endangered dwarf bear poppy and Holmgren milkvetch by keeping protections in place for occupied and suitable habitat on non-federal lands.

The Draft SEIS also concludes that the Red Hills Parkway Expressway and St. George Boulevard/100 South One-Way Couplet alternatives would have no impacts on ESA-listed plant species, but finds that the Red Hills Parkway Expressway alternative could adversely impact the BLM sensitive Virgin thistle. And because Zone 6 and the associated protections on non-federal lands would be removed from the Reserve under both these alternatives, the Draft SEIS suggests this could adversely impact the endangered dwarf bear poppy and sensitive Parry's sandpaper plant.

The purported benefits to endangered plant species in Zone 6 from maintaining protections on non-federal lands are overstated. Given the direct impacts to sensitive Virgin thistle populations that likely would result from construction of the Northern Corridor Highway in Zone 3, the alleged benefits related to Zone 6 do not move the needle in favor of the UDOT ROW Alignment or Southern Alignment. The Draft SEIS emphasizes that approximately 10% of the total known dwarf bear-poppy population exists on state-owned lands in Zone 6 but fails to note that a large majority (over 70%) of dwarf bear poppy habitat is on federal

lands, including within the Red Bluff ACEC where stricter management prescriptions apply. BLM designated the 6,166-acre Red Bluff ACEC, the eastern half of which falls within Zone 6, specifically to protect the dwarf bear-poppy, and the protections for this ACEC will not change regardless of which alternative BLM ultimately selects.²⁰ Similarly, the Holmgren milkvetch only exists on federal lands in Zone 6 and BLM's management of those lands will not change even if Zone 6 is removed from the Reserve. As shown, although the statement in the Draft SEIS that maintaining Zone 6 as part of the Reserve would protect occupied and suitable habitat for dwarf bear-poppy and Holmgren milkvetch is technically true, it is misleading because by far the most occupied habitat exists on federal lands where the protections will not change under any of the alternatives.

Special Status Plants Cumulative Impacts

As previously stated, the FEIS must better analyze the proposed action's cumulative impacts, defined as "the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.1(g)(3). A simple table in the Draft SEIS listing potential future projects, with terse descriptions, does not constitute an adequate cumulative impacts analysis.

Transportation Analysis

There is overwhelming, peer-reviewed evidence that highway expansion does not eliminate traffic congestion in the long-run (Duranton & Turner, 2011). Empirical studies have found that vehicle miles traveled tend to increase proportionately to highway capacity expansion (e.g. Goodwin, 1996), negating the intended effects.

Accordingly, the recently released traffic analysis by the MPO/Horrocks points to the fact that VMT will increase for all except the no-action alternative. The report highlights:

"This is typical with roadway improvements as bottlenecks in the network are removed and people can travel longer distances in shorter amounts of time." (MPO 2024, p. 22)

Nationally, even though increase in road capacity has far outpaced population growth over the last 30 years, congestion has grown significantly (Transportation for America, 2020). New highway construction projects are expensive liabilities for communities economically, socially, and environmentally, and in many cases, especially as they allow for new development, they induce demand for more vehicular travel (Duranton & Turner, 2011).

As detailed in the 2023 Red Cliffs Coalition scoping comments, BLM and FWS must take into account growth-inducing impacts of the Northern Corridor Highway (Conserve Southwest Utah et al., 2023, 11ff.). To date, this has not been accomplished, but must before the Record of Decision can be signed and issued.

²⁰ In 2016, to protect the dwarf bear poppy and its habitat, BLM also designated the South Hills ACEC (1,950 acres adjacent to Zone 6) and the Webb Hills ACEC (520 acres). The South Hills ACEC protects Holmgren milkvetch habitat in addition to dwarf bear poppy habitat.

Additional growth and development is enabled and incentivized by the construction and operation of the Northern Corridor highway through Red Cliffs NCA, which would provide access between the private and municipal lands that lie directly to the west, south, and east of the proposed NCH. Selecting an alternative through the NCA would put additional development pressure on the private inholdings scattered within the NCA and Reserve in the immediate vicinity of the highway.

The SEIS should examine the following types of growth induced by a highway through Red Cliffs: (1) development of private lands; (2) construction of new roads; and (3) induced demand for travel. Induced demand is a well researched phenomenon that is often underestimated in environmental review processes (Volker et al., 2020).

As there is robust and longstanding evidence for links between the built environment and travel demand (Merlin, 2018), we urge the BLM to re-evaluate how coordinated land use and transportation planning efforts could reduce the need for a new highway through Red Cliffs NCA and influence the results of the traffic analysis, especially as the following assumptions from the EIS (2020) are outdated:

“Based on local planning and available funding, it is unreasonable to assume the St. George urbanized area could develop a robust transit system within the planning horizon represented by the EIS that would eliminate a substantial amount of vehicle trips from the transportation system.” (Bureau of Land Management (BLM), 2020, 2-34).

There are now considerations to create a transit district and a more robust transit plan, as was discussed during the May 2024 Dixie MPO Transportation Executive Council (DTEC) meeting. A regional planning body in Denver, Colorado, has recently reallocated millions of dollars from highway expansions to multi-modal transportation efforts, including fast transit and bike lanes, and other states are following suit (Kimble, 2024). Transit has been shown to mitigate traffic congestion, especially in areas with high congestion around chokepoints, with its economic and environmental benefits far outweighing its cost (Anderson, 2013).

The BLM should also update their outdated claim that: “Non-motorized travel in the St. George urbanized area represents a miniscule amount of all travel and is insignificant when it comes to serving the area’s transportation needs” (Bureau of Land Management (BLM), 2020, 2-34). While trips in Washington County made on foot or by bicycle comprised only 6% (walking) and 1.3% (biking) of all trips in Washington County in 2012 (Wasatch Front Regional Council et al., 2013, 39), the recent household travel survey conducted in 2023 shows a significant increase: now 10.8% of all trips in Washington County are made walking, and 2.1% of all trips are made by bike (RSG, 2024, 29). In 2017, 40% of all trips made in Saint George were shorter than two miles, which means that a large number of trips in the area could be more easily done by bike or walking than longer commutes (City of Saint George, 2017, 7). These numbers point to a readiness for shifting and supporting alternative modes of transportation for short distances to alleviate traffic congestion.

Furthermore, nearly 40% of the population of Saint George and Washington City are under 16 or over 70 years of age and hence not able or less likely to drive or own a car (City of Saint George, 2017, ES-1; Washington City, Utah et al., 2017). Nationally, the number of people who cannot drive is estimated to comprise about 30% of the US population (Zivarts,

2024). We urge the BLM to update assumptions on transit demand and active transportation to account for these numbers and demographic changes in the years ahead.

The recently published traffic analysis by Horrocks relies on Level of Service (LOS) as the primary measure of effectiveness (MOE) for the Northern Corridor Highway. LOS is insufficient in assessing the effectiveness of the NCH and its alternatives for the above mentioned reasons.

Based on LOS, the Red Hills Parkway Expressway still performs better than the UDOT ROW (Horrocks Engineering Group, 2024)(p. 14). Further, this updated traffic analysis states:

"under each of the alternatives the St George Blvd/Bluff Street intersection operates at LOS E or worse conditions for all alternatives except for the One-Way Couplet. The Green Spring Drive/Telegraph Street intersection operates at borderline D/E conditions under each of the alternatives." (Horrocks Engineering Group, 2024) (p. 14)

This indicates that even according to these limited models, the proposed projects do not solve the problem of congestion in several of the key intersections in Saint George.

Horrock’s preliminary cost estimate (Table 1) shows that the UDOT ROW would be the most expensive project, even with high contingencies built in for the other alternatives and high estimates for ROW acquisition for the two alternatives outside of the NCA (Horrocks Engineering Group, 2024).

Table 1. Comparison of Northern Corridor route alternative costs reported in *Preliminary Northern Corridor Cost Estimates* (Horrocks Engineering Group, 2024).

	T-Bone	UDOT ROW	Southern Alignment	RHP Expressway	One-way Couplet
Construction	\$153,011,033	\$163,251,407	\$156,383,114	\$78,503,539	\$21,941,597
Contingency	\$30,602,207	\$32,650,281	\$31,276,623	\$39,251,770	\$6,582,479
ROW	\$250,000	\$40,000	\$500,000	\$83,950,000	\$20,749,035
Engineering	\$30,602,207	\$32,650,281	\$31,276,623	\$15,700,708	\$4,388,319
TOTAL COSTS (2024 Dollars)	\$214,465,447	\$228,591,969	\$219,436,360	\$217,406,016	\$53,661,431

We urge the BLM to reconsider how travel demand is affected by regional efforts to coordinate land use and transportation planning that mitigate sprawl and reduce car dependency. This could include approaches such as infill development, transit oriented development, increasing connectivity and capacity in the existing road network (e.g. the Red Hills Parkway Expressway Alternative), increasing safety and comfort for cyclists and pedestrians to incentivize these modes for shorter trips, and more (Federal Highway Administration, 2017).

Accounting for these factors (induced demand, growth inducing impacts, changes in the likelihood of a robust transit strategy, changes in mode preferences, demographic makeup of the region, and coordinated land use and transportation planning) strengthens the case for rejecting the highway right-of-way through Red Cliffs NCA. We urge the BLM to reject the right-of-way for a highway through the NCA.

Further, we urge BLM to conduct an independent review and verification of Washington County's updated transportation analysis (including the model's input parameters, values and assumptions). It is a conflict of interest for Washington County to fund this traffic analysis, and the results should only be included in the final SEIS if the assumptions, results, and conclusions can be independently verified. Moreover, BLM should evaluate the appropriateness of including the updated traffic analysis given the SEIS process only includes "those resources that warrant reconsideration based on new information or changed conditions beyond what was presented in the FEIS."

Conserve Southwest Utah has commissioned an expert review of Washington County's updated traffic analysis. The initial findings of this expert review are included in [Attachment B](#) and should be considered by BLM in the SEIS process. The full expert review report will be completed and submitted to BLM as soon as it is available. Given that the updated traffic analysis was not released to the public until June 20th—giving the public only 19 days to comment on this updated analysis—we respectfully request that if BLM chooses to incorporate Washington County's updated traffic analysis in the final SEIS, BLM must also consider and incorporate the findings from Conserve Southwest Utah's expert review of the updated traffic analysis in the final SEIS.

Zone 6

Zone 6 Assumptions. The Draft SEIS includes impacts from a potential future scenario where Zone 6 is developed if the highway right-of-way through Red Cliffs NCA is denied. These lands are worthy of permanent protection and are not a bargaining chip. The BLM and FWS should consider options to maintain or bolster the protection of Zone 6 lands as habitat necessary in maintaining and recovering the tortoise, which is on an extinction trajectory and faces increased fire risk due to climate change, population growth, and surging invasive plants—especially in light of recent fires and the increased take (or number of tortoises to be killed) requested under the 2020 Habitat Conservation Plan. BLM must examine and assess the impacts of development of all non-federal lands within Zone 6 as a possibility under *all* alternatives, especially since the State of Utah and SITLA have refused to permanently protect these lands, and thus, they remain subject to development under each alternative.

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