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**Trail Development in the Lake Mountains, North Oquirrh Management Area and Rose and Yellow Fork
Canyons
DOI-BLM-UT-W010-2020-0007-EA
Environmental Assessment**



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Chapter 1. Purpose & Need

1.1 Background

This environmental assessment (EA) has been prepared to disclose and analyze the environmental consequences of the proposed development of trails that could be situated to avoid or minimize impacts to identified sensitive resources within the identified analysis area (AA) (Figure 1).¹ Trail development would follow industry standards such as Guidelines for a Quality Trail Experience (BLM, IMBA 2017) and comply with *the Architectural Barriers Act Accessibility Guidelines for Outdoor Developed Areas*, as appropriate. Trail tread width would generally be between 12-36 inches wide; trails could be sited to avoid mature vegetation such as tall trees or bushes, but vegetation that presents a hazard to trail users (e.g., woody shrubs or tree branches) would be cleared for approximately 2-4 feet on either side of the trail. The BLM is also considering how to best comply with Secretarial Order 3376 – Increasing Recreational Opportunities through the Use of Electric Bikes; the current proposed action would consider the use of Class 1 electric bicycles on appropriate trails.

The BLM anticipates that up to 25 miles of new, single-track, trails would be constructed within the Lake Mountains, up to 15 miles would be constructed within the North Oquirrh Management Area (NOMA), and up to 15 miles would be constructed within Rose and Yellow Fork Canyons.² The BLM would also consider associated needs for parking, signage and interpretive or area information, and for the sanitary disposal of human waste, which may necessitate the development of restroom facilities. In cases where public access is limited, the BLM would pursue access easements from adjacent willing landowners.

The BLM would identify appropriate stipulations to protect cultural resources, historic properties, wildlife habitat, water quality, soils and vegetation, visual and other resources, and disclose impacts to resources that are present with a potential for relevant impact that need to be analyzed in detail in this EA.

The BLM may offer no-cost rights-of-way to municipalities (likely 10 feet in width) for the construction and maintenance of trails. BLM can share the financial burden of costs for signage, equipment, volunteer workdays, etc.

The general discussion and legal land description for the AA is as follows:

- Lake Mountains, Utah County. Approximately 17,250 acres in Township 5 South, Range 1 West; Township 6 South, Range 1 West; Township 7 South, Range 1 West; Township 7 South, Range 1 East; Salt Lake Meridian.

¹ Consistent with the 40 Code of Federal Regulations (CFR) Parts 1500 through 1508; § 1501.3 and § 1501.5.

² User-created, unplanned trails currently exist in all three areas. Existing trails that do not conform to the protective measures in Appendix C would be reclaimed or rerouted, while currently existing trails that are in concert with the protective measures could be incorporated into the overall trail network, and would not be considered “new” construction. Existing or designated two-tracks or motorized routes would also not be considered “new” construction for the purposes of analysis. The BLM will rely on satellite imagery or the most recent trail data collected by the agency or Cooperating Agencies prior to the scoping period for this EA to determine “existing” trails.

- North Oquirrh Management Area, Tooele County. Approximately 5,285 acres in Township 1 South, Range 4 West; Township 2 South, Range 4 West; Township 2 South, Range 3 West; Township 3 South, Range 4 West; Township 3 South, Range 3 West Salt Lake Meridian; west of the ridgeline and at elevations lower than approximately 6,200 feet.
- Rose and Yellow Fork Canyons, Salt Lake County. Approximately 1,520 acres in Township 4 South, Range 2 West; Salt Lake Meridian.

All three areas vary in elevation from 4,400 feet to 7,690 feet at the highest point on Lake Mountain. The ecology is a sagebrush steppe ecotype. Scattered conifers are found on the upper elevations with juniper scrub oak on the lower slopes. Cheatgrass and other non-native species are spread throughout the AA. There are winter livestock grazing allotments in the areas and year-round habitats supporting game and non-game wildlife. Various avian wildlife species are also found including raptors and passerine birds. These areas are located in or near the Wasatch Front and currently provide nearby residents with opportunities for dispersed recreation. Housing developments are immediately adjacent to all three areas. For each area, the BLM has been coordinating with the appropriate municipal government(s) on provision of planned recreation infrastructure to meet the needs of their growing communities.

This EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any “significant” impacts could result from the analyzed actions. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of “Finding of No Significant Impact” (FONSI). If the decision maker determines that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, whether the proposed action or another alternative or a combination of the alternatives. A DR, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in “significant” environmental impacts in accordance with the management prescriptions contained in the Pony Express Resource Management Plan, as amended.

The organizational structure of this EA is as follows: Chapter 1 presents the purpose and need for agency action, land use plan conformance, relationship to other guidance, as well as the relevant issues that could be affected. Chapter 2 presents the description/range of alternatives, including alternatives that were considered but eliminated. Chapter 3 presents the affected environment and potential environmental impacts or consequences resulting from the implementation of each alternative considered. Chapter 4 presents the consultation/coordination efforts, including the public outreach. Chapter 5 presents the references, acronyms/abbreviations and appendices used in preparing this EA. Appendix A contains the figures/maps used. Appendix B contains the interdisciplinary team (IDT) checklist. Appendix C contains the identified protective measures.

The State of Utah’s Public Land Policy Coordinating Office (PLPCO), the State of Utah’s School and Institutional Trust Lands Administration (SITLA), Tooele County Commission, Tooele County Health Department, Utah County Commission, Salt Lake County Parks and Recreation Department, Eagle Mountain City, City of Saratoga Springs, Fairfield Town, City of Herriman, Tooele City, National Park Service (National Trails Office and Rivers Trails, and Conservation Assistance Program), and Utah Army National Guard (Camp Williams) were invited to serve as cooperating agencies in the preparation of this EA. Additional information is presented in Section 4.1.

The Utah State Historic Preservation Office, State of Utah’s Public Land Policy Coordinating Office (PLPCO), Utah Division of Oil, Gas and Mining, National Park Service (National Trails Office), Utah Rock Art Research Association, Utah Statewide Archaeological Society, Utah Professional Archeological Council, National Pony Express Association, Oregon-California Trail Association, Tooele County Historic Preservation Commission, Confederated Tribes of the Goshute Reservation, Hopi Tribe, Pueblo of Jemez, Skull Valley Band of the Goshutes and the Ute Tribe were invited to participate as consulting parties under the National Historic Preservation Act. Additional information is presented in Section 4.3.

1.2 Purpose and Need

The purpose and need is to respond to consistent expressions of interest from multiple user groups in adjacent, growing communities to expand opportunities for backyard to backcountry trails recreation. Action is necessary to curtail the development of additional unplanned or user-created trails, reduce the proliferation of substandard trails, while providing for safe recreational experiences and the protection of resources. The BLM is seeking to develop sustainable trail systems that minimize impacts to resources, offer safe access on public lands, and cultivate user groups that can assist in meeting stewardship goals.

1.2.1 Decision to be Made

The decision to be made is to determine if trail systems, including any associated facilities, would be constructed, and if any rights-of-ways would be issued, and what terms and conditions would be applied.

1.3 Conformance with BLM Land Use Plan(s)

The alternatives are in conformance with the land use planning decisions in the Pony Express Resource Management Plan (RMP) (BLM 1990) as amended (BLM 1992, BLM 1997, BLM 2018a), and is consistent with the following objectives, goals, and decisions of the approved plan:

Program	Decision Number	Page Number(s)	Title
Recreation	1	40, NOMA	Special/Extensive Recreation Management Areas, including the NOMA
	2	41, NOMA	Off-Highway Vehicle Designations, including the NOMA
Visual Resource	1	41, NOMA	Visual Resource Management Classes
Cultural Resource	1	49	Inventory and Evaluate
	2	49	Evaluate Recorded Sites

Program	Decision Number	Page Number(s)	Title
Transportation and Utility Corridors	1	56, NOMA	ROWs Within and Outside of Corridors, including the NOMA
Lands	7	14, NOMA	Access, including the NOMA
	8	14	Recreation and Public Purposes
Hazardous Waste Management	1	29	Evaluate and Address Hazardous Waste
Soil, Water, and Air Program	1	30	Evaluate on a Case-By-Case Basis
	2	30	Acquire and Protect Water Rights
	3	30	Monitor Water Quality and Comply with State Standards
	4	30	Identify and Evaluate Erosion
	5	31	Riparian Areas/Wetlands/Other Water Sources Objectives
	6		Preserve/Protect/Restore Floodplains and Wetlands
	7	31	Maintain or Improve Air Quality
Wildlife and Fisheries Program	4	34	Protect Important Wildlife Habitat
	5	37	Improve Crucial Habitats

The action alternatives are also consistent with the objectives, goals and decisions related to the BLM’s programs (including but not limited to): Fire/Fuels Management, Invasive Species, Livestock Grazing, Travel/Transportation, Minerals, and Forestry. It has been determined that the alternatives would not conflict with other decisions throughout the land use plan, as amended.

1.4 Relationship to Statutes, Regulations, or Other Plans

Implementation of the action alternatives is consistent with the applicable federal and state statutes, regulations, policies, county ordinances and other plans to the maximum extent possible. Federal policies include BLM Manuals, Handbooks (H), Instruction Memorandum (IM) [Headquarters (HQ), previously Washington Office (WO), and Utah State Office (UTSO)], Executive Orders (EOs) and Secretarial Orders (SOs) (Table 1). Compliance with applicable statute, regulation, and policy includes the completion of procedural requirements, including consultation, coordination, and cooperation with stakeholders, interested publics, and Native American Tribes and completion of the applicable level of NEPA review.

Table 1. Statute, Regulation, Policy and Other Plans by Resource.

Policy*	Authority
All Resources	
Statutes	<ul style="list-style-type: none"> ▪ Federal Lands Policy Management Act (FLPMA) ▪ National Environmental Policy Act (NEPA) ▪ John D. Dingell Jr. Conservation, Management, and Recreation Act (“Dingell Act”) ▪ National Defense Authorization Act for Fiscal Year 2017 (“NDAA”).
BLM WO IM	<ul style="list-style-type: none"> ▪ WO IM 2018-062 Addressing Hunting, Fishing, Shooting Sports, and Big Game Habitats, and Incorporating Fish and Wildlife Conservation Plans and Information from Tribes, State Fish and Wildlife Agencies, and Other Federal Agencies in BLM NEPA Processes

Policy*	Authority
Manuals or Handbooks	<ul style="list-style-type: none"> ▪ BLM Handbook 1790-1, BLM National Environmental Policy Act, Rel. 1-1710 dated 01/30/2008
Recreation	
Statute	<ul style="list-style-type: none"> ▪ Federal Lands Recreation Enhancement Act (FLREA)
CFRs	<ul style="list-style-type: none"> ▪ 43 CFR §2930 Permits for Recreation on Public Lands ▪ 43 CFR §8360 Visitor Services ▪ 43 CFR §8365.1-6 Rules of Conduct - Supplementary Rules
BLM WO/UT IMs	<ul style="list-style-type: none"> ▪ WO IM 2013-161 Processing and Approving Supplementary Rules ▪ WO IM 2014-131 Implementation of the Federal Lands Hunting, Fishing and Shooting Sports Roundtable Memorandum of Understanding ▪ UT 2013-037 Utah Recreation Fee Program Toolbox
Manual / Handbook	<ul style="list-style-type: none"> ▪ BLM Manual 2930, Recreation Permits and Fees, Rel. 2-296 dated October 22, 2007 ▪ BLM Handbook 2930-1, BLM Recreation Permit and Fee Administration Handbook, Rel. 2-300 dated November 17, 2014
Visual Resources	
Manual / Handbooks	<ul style="list-style-type: none"> ▪ BLM Manual 8400, Visual Resource Management, Rel. 8-24, dated April 5, 1984 ▪ BLM Handbook 8431-1, Visual Resource Contrast Rating, Rel. 8-30, dated January 17, 1986 ▪ BLM Handbook 8410-1, Visual Resource Inventory, Rel. 8-28, dated January 17, 1986
Wildlife/Migratory Birds/Special Status Species	
Statutes	<ul style="list-style-type: none"> ▪ Migratory Bird Treaty Act (MBTA) ▪ Endangered Species Act (ESA) ▪ Bald and Golden Eagle Protection Act (BGEPA)
EO	<ul style="list-style-type: none"> ▪ EO 13186 Responsibilities of Federal Agencies to Protect Migratory Birds
BLM UT IM	<ul style="list-style-type: none"> ▪ UT-BLM-2019-005 Updated Bureau of Land Management (BLM) Sensitive Species List for Utah
Lands and Access	
SO	<ul style="list-style-type: none"> ▪ SO 3373 Evaluating Public Access in Bureau of Land Management Public Land Disposals and Exchanges
CFRs	<ul style="list-style-type: none"> ▪ 43 CFR §2650.4-7 Public easements ▪ Part 2800 Rights-of-Way under the Federal Land Policy Management Act (43 CFR §2800) ▪ Part 2920 Leases, Permits and Easements (43 CFR §2920)
Invasive/Noxious Weeds	
EO	<ul style="list-style-type: none"> ▪ Control of Invasive Species (EO 13112)
Vegetation (excluding special status species)s	
BLM UT IM	<ul style="list-style-type: none"> ▪ Updated Bureau of Land Management (BLM) Sensitive Species List for Utah, UT-BLM-2019-005
Air Quality	
Statutes	<ul style="list-style-type: none"> ▪ Clean Air Act (CAA)
BLM WO IM	<ul style="list-style-type: none"> ▪ Guidance for Conducting Air Quality General Conformity Determinations, WO IM 2013-025
Cultural Resources	

Policy*	Authority
Statutes	<ul style="list-style-type: none"> ▪ National Historic Preservation Act (NHPA) ▪ Archaeological Resources Protection Act (ARPA)
EO	<ul style="list-style-type: none"> ▪ Consultation and Coordination with Indian Tribal Governments (EO 13175 and 13084)
* as amended.	

State of Utah Plans

The State of Utah Resource Management Plan (Emery and Johnson 2018) identifies considerations, objectives, policies and guidelines regarding the management of multiple resources and land uses within Utah, including Recreation and Tourism on public lands. The State of Utah supports BLM to provide a satisfying visitor experience on Utah’s public lands.

Local land use plans considered during environmental review process include the following:

- Salt Lake County General Plan (2010) and Salt Lake County RMP (2017)
- Tooele County General Plan (1995) and Tooele County RMP (2017)
- Utah County General Plan (2006) and Utah County RMP (2017)

Salt Lake, Tooele and Utah County Plans

The Salt Lake County General Plan (Salt Lake County 2010, as revised 2017) identifies the County’s resource management plan with existing conditions, desired future conditions, and monitoring. The proposed activities are consistent with the County’s management objectives for Recreation and Tourism. Specific objectives are to 1. Engage recreation users, resource managers, and local residents in developing strategies for managing recreation to meet desired future conditions and address recreation pressure and demands 2. Encourage education in values of outdoor education 3. Improve the quality of recreation experience for visitors and residence. Chapter 20.2 indicates that Salt Lake County desired future state is to provide high-quality recreational experiences for visitors and residents. To accomplish this, the county desires a recreation system that is balanced, sustainable, and provides a range of settings that accommodates for year-round outdoor recreation opportunities. The recreation system must account for heavy and increasing demands with sufficient facilities, maintenance, and transportation to support high levels of use at locations with convenient access. The system should also be capable of providing opportunities for environmental education, backcountry experiences, and cultural resource protection.

The Tooele County General Plan (Tooele County 2017). identifies the County’s resource management plan with existing conditions, desired future conditions, and monitoring. The proposed activities are consistent with the County’s management objectives for Recreation and Tourism. Specific objectives are to: 1. Support and manage existing recreational infrastructure in order to provide a high degree of user satisfaction, maintain facilities, mitigate user conflict, minimize resource impacts, and reduce trespass to private property. 2. Support the development of new recreational opportunities to support growing demand in the region. 3. Support tourism in the region. 4. Actively participate in public land planning processes to ensure county goals for recreation and tourism are incorporated in future land use plans. 5. Develop a recreation corridor extending from the northern shore of Stansbury Island south to the southern end of the county in the Rush Valley, Skull Valley, and West Desert planning districts. Chapter 20.2 indicates that Tooele County desired future state is to support existing recreational infrastructure to provide a high degree of user satisfaction, maintain facilities, mitigate user conflict, minimize resource

impacts, and reduce trespass to private property. The county also supports the creation, development, and maintenance of new recreation opportunities on public lands to benefit residents as well as attract tourists and visitors. Recreation opportunities should be available to all individuals regardless of age and/or physical ability. These opportunities should occur in a resource-sensitive manner with minimal conflict among uses/users. Tooele County supports the creation of a recreation corridor, extending from the northern shore of Stansbury Island south to the southern end of the county in the Rush Valley, Skull Valley, and West Desert planning districts, which would support a wide variety of recreation uses and provide the county with tourism benefits. Tooele County desires to actively participate in agency planning activities related to recreation and tourism.

The Utah County General Plan (Utah County 2016) identifies the County's resource management plan with existing conditions, desired future conditions, and monitoring. The proposed activities are consistent with the County's management objectives for Recreation and Tourism. Specific objectives are to 1. The health and quality of wildlife, land, air, and water are the foundations of a sound recreational infrastructure. Page 72 indicates that Utah County desired future state is to Develop appropriate facilities on public lands where the present facilities are not meeting the demand and where it meets the highest net public benefit.

The following NEPA documents are incorporated by reference:

- North Oquirrh Mountains Pony Express Plan Amendment EA and DR – UT-020-96-36. Addressed Lands, Recreation and Wildlife (BLM 1997) (Refer to pages 4 to 8).
- Eastern Lake Mountains Target Shooting Plan Amendment EA, FONSI, and DR – DOI-BLM-UT-W010-2015-0023-EA. Addressed target shooting and supplementary rules (BLM 2018). (Refer to pages 1 to 6).
- Off-Highway Vehicle Designations EA, FONSI, and DR – UT-020-90-11. Addressed OHV designations for public lands governed by the Pony Express RMP (BLM 1992). (Refer to all pages).

1.5 Identification of Issues

Identification of issues requiring analysis was accomplished through internal review/discussion, coordination with cooperating agencies and consulting parties and through addressing scoping comments submitted from the public.

The IDT identified resources within the AA, which might be affected, and considered potential impacts using current office records, geographic information system (GIS) data, site visits, and information received from the public. The results of this review are summarized in the IDT Checklist (Appendix B) and in the Scoping Report (BLM 2020).

Resources determined to be present and potentially affected by the alternatives are carried forward for analysis (Section 1.5.1). Where resources are present but not determined to be impacted or resources are determined not to be present, a rationale for not considering them further is provided in the IDT Checklist (Appendix B), Section 1.5.2 and the Scoping Report (BLM 2020).

1.5.1 Issues Analyzed in Detail

Based on scoping comments, internal review, including Cooperating Agency input, the following key issue statements and corresponding impact indicators were developed (Table 2):

Table 2. Issues Identified for Detailed Analysis.

Resource	Issue Statement
Lands/Access and Property Boundary Evaluation	How would the proposed new recreation developments/facilities affect authorized and new land uses (e.g., rights-of-way)?
Migratory Birds	How would recreational use affect nesting birds? How would development of new recreational facilities affect nesting birds and bird habitats?
Recreation	How would the recreational developments/facilities affect the recreational experience of public land users?
Threatened, Endangered, Candidate or Special Status Animal Species (Aquatic and Terrestrial)	How would recreational facility development and recreational use affect sensitive species?
Vegetation	How would new recreational trails and infrastructure impact vegetation?
Visual Resources	How would new recreational trails and infrastructure impact visual resources? What trail layout/design attributes can be utilized to minimize visual contrast in sensitive areas?
Wetlands / Riparian Zones & Floodplains	How would trail crossings of intermittent and perennial streams affect riparian habitats?
Wildlife (Aquatic and Terrestrial) Excluding Special Status Species	How would recreational facility development and recreational use affect deer migratory behavior? How would recreational facility development and recreational use near fawning areas affect deer reproductive success? How would recreational facility development and recreational use affect deer and elk use of winter range and overwinter survival?

1.5.2 Issues Not Analyzed in Detail

Resource issues considered but not carried forward for detailed analysis are listed in the IDT Checklist (Appendix B) with supporting rationale (Not Present or Not Impacted, Appendix B) and the Scoping Report (BLM, 2020). Some of these issues include statements of support or opposition, and user preferences/frustrations/complaints.

These issues were eliminated from further analysis as they do not provide information that is: essential to make a reasoned choice among the alternatives, important to potential impacts of the alternatives; or relevant to responding to the BLM's purpose and need for the proposed project (Table 3).

Table 3. Issues Considered and the Rationale for Elimination.

Resource	Issue Statement	Rationale for Not Analyzing in Detail
Historic Properties	What are the potential impacts from ground disturbing activities to sites eligible for listing on the NRHP and sites that are not eligible for listing on the NRHP?	<p>The Cultural Resources and Tribal Consultation Stipulation (H 3120-1) is applied across all parcels. This stipulation states that the area(s) may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, Executive Order 13007, or other statutes and executive orders. The BLM will not approve any ground-disturbing activities that may affect any such properties or resources until it completes its obligations (e.g., State Historic Preservation Officer (SHPO) and tribal consultation) under applicable requirements of the NHPA and other authorities.</p> <p>The BLM may require modification to development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized, or mitigated.</p>
Motorized Use	Why doesn't the BLM consider additional motorized trails?	<p>Motorized use is outside of the scope of this EA. A portion of the NOMA is limited to designated routes, with seasonal closures for Big Game Winter Range on the low elevation levels. Approximately 12,445 acres of the NOMA is closed to OHV use (BLM 1997). BLM-managed lands in the Rose and Yellow Fork Canyon and the Lake Mountains are designated as limited to existing routes for OHVs (BLM 1992). This project would not affect motorized access or travel management designations as it does not include any changes to the OHV designations. Future planning for motorized uses across the Salt Lake Field Office would most appropriately occur through the travel management planning process under 43 CFR §8342.</p>

Chapter 2. Description of Alternatives

2.1 Alternative A – No Action

Under the no action alternative, the BLM would not authorize the construction of any new trails nor associated infrastructure within the Lake Mountains, North Oquirrh Management Area (NOMA), or Rose and Yellow Fork Canyons. Planning for additional trails may be completed on an individual, site-specific basis. Visitors would continue to be able to travel cross-country for trail uses and would continue to use the existing network of user-created trails. Repeated use in certain areas would likely expand the existing trail network, absent of planning or design and the application of any protective measures. The BLM would not grant rights-of-way for the construction or continued maintenance of trails, and protective measures (mitigation), monitoring, and compliance would not be applied.

2.2 Alternative B – Proposed Action

The BLM would authorize the construction and maintenance of up to 25 miles of new, single-track, trails within the Lake Mountains, up to 15 miles within the NOMA, and up to 15 miles within Rose and Yellow Fork Canyons, subject to the protective measures identified in Appendix C. The BLM would offer rights-of-way to entities such as municipal governments to develop (construct and maintain) trails to facilitate new outdoor recreation opportunities on BLM-managed lands within the Lake Mountains, NOMA, and Rose and Yellow Fork Canyons. This EA does not propose an exact centerline alignment for future trails, rather it establishes the conditions under which trail development may occur in the AA.

The project would not change the availability of any existing motorized access (BLM 1992) but would expand a trail system that supports hiking, biking, horseback riding, or other human-powered recreational uses. Similarly, currently existing trails³ that are in concert with the protective measures could be incorporated into the overall trail network, and would not be considered “new” construction. Existing or designated two-tracks or motorized routes (BLM 1992) would also not be considered “new” construction for the purposes of analysis. However, any existing trails that do not conform to the protective measures in Appendix C would be reclaimed or rerouted.

Trail development would follow industry standards such as Guidelines for a Quality Trail Experience (BLM, IMBA 2017)⁴ and comply with the Architectural Barriers Act Accessibility Guidelines for Outdoor Developed Areas,⁵ as appropriate. Trail tread width would generally be between 12-36” wide; trails would be sited to avoid mature vegetation such as tall trees or bushes to the greatest extent practical, but vegetation presenting a hazard to trail users (e.g., woody shrubs or branches) would be cleared for approximately 2-4 feet on either side of the trail.

⁴ <https://www.blm.gov/sites/blm.gov/files/Guidelines-for-a-Quality-Trail-Experience-2017.pdf>

⁵ <https://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas>

Under the proposed action, the BLM could authorize the use of Class 1 electric bicycles⁶ on trails that are developed by the BLM specifically for bicycle use, or on trails that are authorized under rights-of-way to other entities, when the ROW applicant has specifically requested the authorization of Class 1 electric bikes. Class 1 electric bikes may be considered with further review and route analysis. Within the target shooting closure area (BLM 2018a) of the Lake Mountains (an area with high rock art density), the BLM would not authorize any bicycle use on interpretive trails that are specifically intended for access to cultural resources such as rock art, in order to preserve the integrity of the cultural setting.

The BLM could authorize new trailheads, or the improvement of current areas where the public is parking to access public lands, with associated short access roads and parking areas (an anticipated 1-5 acres each) that may include restroom facilities (e.g., single- or double-vault outhouses). Under the proposed action, the BLM could authorize up to three trailheads with parking areas, short access roads, and restrooms on BLM-managed lands in the Lake Mountains, two within the NOMA, and one within Rose and Yellow Fork Canyons. The BLM could also authorize the development of trailhead information kiosks at each developed trailhead and additional signage along trails (e.g., brown fiberglass posts) for trail marking purposes. Future recreation events on new or existing trails on BLM-managed surface would be considered under BLM's 2930 regulations for special recreation permits.

The BLM would engage with any adjacent willing landowners, local governments, and state agencies to identify and implement mutually-beneficial partnerships to enhance public recreational opportunities, access, and experiences while maintaining other important resources and public land uses within the Lake Mountains and the NOMA. The BLM would also pursue access easements from willing adjacent landowners to ensure legal public access and to prevent inadvertent trespass, or enter into Memorandums of Understanding for easements obtained by other entities (e.g., state or local governments) that pertain to access to BLM-managed public lands in the AA.

The BLM would apply appropriate protective measures (mitigation) (Appendix C) to protect cultural resources, wildlife habitat, water quality, soils and vegetation, visual and other resources. Resource specific requirements are addressed in the applicable subsections within Chapter 3 and based on Appendix B.

2.3 Alternatives Considered but Eliminated

Stabilization of the Historic Tram Building in the NOMA

The BLM considered changes to the historic and defunct tram building within the NOMA. In consultation with the State Historic Preservation Office (SHPO) and all identified consulting parties concerns regarding long-term management of the tram were expressed. The tram was constructed in the 1950s when KSL-TV installed a transmitter on top of Farnsworth Peak to transport technicians working on the transmitter site. The base building has been damaged by fire and vandalism in the years since the tram ceased operation.

⁶ https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-508_0.pdf and in <https://www.federalregister.gov/d/2020-22239>.

The BLM considered removing the existing perimeter fence, the adjacent concrete building, and the outer metal shell of the tram building. The BLM also considered stabilizing the framework of the building, potentially removing part of the unsafe stairway and moving the existing machinery to the ground floor for interpretive opportunities. Any future development that would include demolition or stabilization of the Tram building would be appropriately analyzed in accordance with NEPA and NHPA regulations prior to implementation of such development.

This alternative was eliminated from detailed analysis because it would not respond to the purpose and need for agency action (Sections 1.2 and 1.2.1).

Chapter 3. Affected Environment and Environmental Impacts

3.1 Background

Affected Environment

The affected environment discussion succinctly describes the existing condition/trend of the environment of the area(s) to be affected or created by the alternatives under consideration, including the reasonably foreseeable environmental trends and planned actions in the area(s). It provides the basis for identifying and interpreting potential impacts. When applicable, biological, physical, or regulatory thresholds are identified.

Environmental Consequences

Effects or impacts means changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives, including those effects that occur at the same time and place as the proposed action or alternatives and may include effects that are later in time or farther removed in distance from the proposed action or alternatives.

Reasonably Foreseeable Actions

Unless otherwise stated below, the AA for each resource is shown in Figure 1. The period of time is 30 years, which coincides with the average term of a ROW at issuance.

Past or ongoing actions that affect the same components of the environment as the alternatives include land exchanges, livestock grazing, recreational use (SRPs, photography, OHVs, etc.), rights-of-way (roads, power lines etc.), habitat restoration and rehabilitation, drought, and wildfire (Table 4).

Any future proposed project within the AA would be analyzed in an appropriate environmental document following site specific planning. Future project planning would also include public involvement; including during future NEPA review of ROW applications and notifications via letter or other means to individuals or groups identified on the project's mailing list.

Additionally, applicants have included, or will likely include, public input on the development of proposals. Proposals could include any activity from a right-of-way, a special recreation permit, and oil/gas leasing and/or development, to a land use plan revision. The reasonably foreseeable actions applicable to the AA are identified in Table 4.

Table 4. Reasonably Foreseeable Actions.

Action	Past	Present	Future
Land use planning.	✓		✓
Livestock grazing authorizations and permit issuance.	✓	✓	✓
Recreation use (dispersed and Special Recreation Permits).	✓	✓	✓
Invasive/noxious weed inventory and treatments.	✓	✓	✓
Hazardous fuels and habitat restoration treatments.	✓	✓	✓
Wildfire stabilization and rehabilitation treatments.	✓	✓	✓
Land tenure adjustments (land exchanges such as the Dingell Act and NDAA).	✓	✓	✓
Right-of-way (facilities, roads, pipelines, powerlines, etc.) authorizations.	✓	✓	✓
Travel and transportation management.	✓		✓

Action	Past	Present	Future
Mineral materials, mining claims, and other minerals authorizations.	✓	✓	✓

General Setting

The Lake Mountains, North Oquirrh Management Area, and Rose and Yellow Fork Canyons are all located near rapidly expanding population centers in Utah, Tooele and Salt Lake Counties. The proposed trail development AA boundary would include approximately 17,250 acres of BLM-managed lands in the Lake Mountains, approximately 5,285 acres (west of the ridgeline and at elevations lower than approximately 6,200 feet) in the NOMA, and approximately 1,520 acres in Rose and Yellow Fork Canyons (approximately 24,055 total acres). Refer also to Section 1.1 and Appendix A.

The AA's landscape is typical for the Basin and Range Physiographic Province, including its flora and fauna. Most access points to public lands come from adjacent single-family home developments or trailheads on private lands. Residential development in the areas continues to expand and homes are planned or constructed very near the edge of public/private land boundaries in all three areas. Trails are already being established and used by recreationists largely from the nearby communities. Local service industries provide goods and services for recreationists. As the population grows, individuals, families and groups naturally seek recreational activities to fulfill interests and improve the quality of their lives; public lands have fulfilled this purpose and provided this opportunity for many years. As adjacent communities undertake long-term or master planning, demand for a safe and sustainable trail system has become a focus for municipal governments.

3.2 Analysis Assumptions and Methodology

The following assumptions were applied during analysis:

- Population growth would continue to increase at current rates in nearby communities.
- Public use of, and demand for recreational opportunities on, BLM-managed public lands would continue to grow with urban expansion and the increasing popularity of recreational activities.
- New forms of outdoor activities and equipment would continue to be developed.
- Proposed management actions are intended for current and expected increases in visitation over the next 10-20 years.
- Planned improvements and developments would be funded and implemented over several years, either through rights-of-ways granted to external entities, or by BLM, in partnership with state and local agencies and other organizations.
- Available grazing permits and current AUMs (animal unit months) on allotments on federal land would remain constant, provided that allotments continue to meet Rangeland Health Standards. Current authorized uses on lands within the AA would continue until permit expiration. Permit renewals would generally be dependent upon the BLM's' current policies and regulations.
- This proposed action would be subject to valid existing rights and outcome of the land exchanges contained within the Dingell Act and NDAA. Any proposals for trails within or adjacent to lands slated for exchange or conveyance to the State of Utah would either be authorized in coordination with SITLA or not considered.

- Associated long-term surface disturbance would generally not exceed a total of approximately 100 acres, as follows:
 - Trails – up to approximately 60 acres of total new disturbance (up to 55 total miles/264,000 feet in length × 10 foot width for the right-of-way (incorporates total trail tread and vegetation removal, which would generally be less than 10' wide).
 - Parking and Restrooms – up to approximately 30 acres (up to 5 acres each, by up to 6 trailheads with parking, restrooms, and kiosks).
 - Access Roads – 10.3 acres (an estimated up to 2,500 feet in length × 30 feet in width feet × 6 new trailheads).
 - Kiosks – <0.1 additional acres outside of new developed trailheads
 - The actual area of disturbance will likely be substantially less than the totals listed above.

3.3 Recreation

3.3.1 *Affected Environment*

The NOMA, Lake Mountains, and Rose and Yellow Fork Canyons are currently being used for semi-primitive recreation opportunities primarily including hiking, biking, equestrian use, hunting, and wildlife viewing. An existing network of unplanned, user-created trails provides access to these areas, particularly in the area of the Lake Mountains closest to Eagle Mountain City, across Rose and Yellow Fork Canyons, and on the low-elevation benches of the NOMA.

Motorized use is authorized and occurs on existing and designated routes within all three areas, except for approximately 12,445 acres of the NOMA, which is closed to OHV use (BLM 1997). Each of these areas has also experienced unauthorized cross-country motorized use away from existing or designated routes.

Much of the AA is impacted by decades of largely unmanaged recreational use and associated urban interface impacts and issues. Existing impacts from recreational use include user-created routes or trail proliferation and associated erosion; surface disturbance, soil compaction, and loss of vegetation/ground cover associated with recreational activities (e.g., camping, OHV use, etc.); damage to cultural resources; litter, and vandalism or property damage.

Existing urban interface issues include illegally dumped garbage including occasional hazardous waste, household waste and appliances, animal carcasses, and abandoned vehicles. The Lake Mountains have specifically experienced an increase in target shooting demand and illegal dumping of garbage; the NOMA and Rose and Yellow Fork Canyons experience illegal dumping but to a lesser extent.

Visitation

The amount of recreational use has grown and continues to grow due to the proximity to rapidly developing urban areas. The BLM estimates approximately 41,600 visits per year at the Lake Mountains. The NOMA currently receives an estimated 4,015 visitors annually. Rose and Yellow Fork do not have specific visitation estimates from the BLM or Salt Lake County; use in this area is compiled with our general dispersed recreation estimates.

This use has increased over the years and is expected to continue to increase with the increasing populations and nearby urban developments of Salt Lake, Tooele, and Utah counties. Visitation occurs year-round, with the highest use on weekends in the spring and fall, and on holiday weekends. Most visitors to these areas are residents from nearby cities and towns.

Recreational Activities & Experiences

The topography and existing roads and trails in the AA provide recreational activities such as hiking, mountain biking, hunting, and wildlife viewing. Each of the areas contains an existing network of unplanned, user-created trails and routes that continue to expand. Social media apps such as Strava and Trailforks indicate regular mountain biking use in several areas; local mountain biking organizations also host annual high school mountain biking team events on existing two-tracks in the Lake Mountains under a letter of agreement with the BLM.

The Lake Mountains, NOMA and Rose and Yellow Fork Canyons are located within UDWR hunting units which are open to archery, rifle, and muzzle loader hunting beginning in late August and ending generally in early November. Hunters have generally been displaced from Rose and Yellow Fork Canyons due to lack of legal access across private property.

Provision of visitor facilities and services is expected to positively impact local economies from regional visitors stopping to purchase goods and services, particularly in Saratoga Springs, Eagle Mountain, Lake Point, Tooele and Herriman.

Visitor services

Currently, the NOMA, Lake Mountain and Rose and Yellow Fork Canyons include basic signage to support visitor information, public safety, law enforcement patrols, and support for emergency services. There are no existing restroom facilities on BLM-managed lands within the AA. Salt Lake County maintains restrooms at a single trailhead at Rose and Yellow Fork Canyons located on Salt Lake County owned lands.

Site-Specific Conditions of Use and Rules of Conduct

Currently, management of recreational users within the areas is limited to the standard BLM regulations (43 CFR §2930 and §8500) for recreation management and rules of conduct for public safety and resource protection that apply to all BLM-managed public lands.

The NOMA is closed to the discharge or use of firearms or dangerous weapons for the purposes of target shooting (BLM 2000). Approximately 2,004 acres of BLM-managed lands in the Lake Mountains, and an additional 1,530 acres of lands managed by SITLA are closed to target shooting (BLM 2018a, BLM 2018b) to protect cultural resources. Under all alternatives these existing closures would remain in effect.

Elsewhere in the Lake Mountains, target shooting activities have displaced motorized and non-motorized types of recreation to those areas and/or in times where and when less target shooting occurs. The target shooting closure (BLM 1997; BLM 2018b) does not prohibit the use of firearms for hunting.

Under 43 CFR §2930, special recreation permits (SRPs) and associated fees are required for all commercial, competitive, and organized group events conducted on BLM-managed public lands; this would also apply to events on trails for which BLM grants a ROW to other entities.

3.3.2 Impacts

3.3.2.1 Alternative A – No Action

Under this alternative, the current management situation of an existing, unplanned and unmaintained user-created trail system with minimal services for approximately an estimated ~50,000 visitors annually would continue.

The NOMA, Lake Mountain, and Rose and Yellow Fork Canyons would remain largely unmanaged public lands supporting dispersed recreation activities. No additional management would be provided beyond that which is currently in place. No other additional visitor services or recreational developments, including parking lots or restroom facilities would be constructed, and no additional resource protection measures would be instituted. The unplanned, user-created trail network would likely continue to expand through unauthorized trail construction or through repeated use in an area, but trails would not be constructed subject to any protective measures, and the BLM would not institute additional management measures to address or mitigate such impacts.

With the high and continued increase in recreational use of the areas, public safety concerns, user conflicts, and resource damage are also expected to continue to increase, particularly absent the protective measures and planned infrastructure that can assist in creating safe and developed recreational experiences. These include illegal target shooting, vandalism and resource destruction, and increased or more complicated emergency responses (e.g., search and rescue actions on more varied/difficult terrain).

Some users prefer an undeveloped setting for recreation, and therefore some recreationists, particularly hunters, may prefer this alternative and the avoidance of the construction of new trails. However, other users prefer a clear and planned network of trails and would seek recreation experiences in other developed areas, or may attempt to create trails absent of BLM authorization or review.

The no action alternative would not contribute to recreation impacts. Current use and management would not change, and unsustainable trends regarding unplanned, user-created trail development would likely continue. Other types of reasonably foreseeable actions identified in Section 3.1 are expected to cause an impact to the recreation setting and/or visitors' recreational experiences without the application of design features and mitigation measures to moderate these impacts.

3.3.2.2 Alternative B – Proposed Action

The proposed action would develop trails and associated infrastructure to facilitate outdoor recreation opportunities. The trails would generally be authorized under a right-of-way to a municipal government, and/or may be built with BLM, contracted, or volunteer labor.

The proposed improvements would have both positive and negative effects on the recreational experience of visitors to the area. The proposed improvements would enhance the recreational experience of those in support of trails, and is expected to result in an overall increase in visitation and visitor satisfaction in the AA. However, the proposed action may detract from the recreational experience of those opposed to them, particularly those who do not want to see any changes to the status quo nor increase in visitation. The majority of respondents during public scoping for this project express a desire for additional recreation amenities and services within the AA (BLM, 2020).

The development of a planned network of trails is anticipated to provide quality opportunities for hiking, mountain biking, and horseback riding, and result in an increase in visitation on trails and within trailhead areas.

The potential for user conflicts exist however a majority of users would benefit from the experience provided. There are areas available for dispersed types of recreation on public lands.

The BLM anticipates an increase in SRP applications for events on trail networks. Permits may be issued on a discretionary basis as determined by the authorized officer. SRP would include Utah BLM standard stipulations and any additional limitations to protect for resource values (Appendix C). Events would be scheduled and signed to minimize user conflicts and safety concerns with other users.

Additionally, the provision of restroom facilities would reduce the potential for inappropriate human waste disposal currently occurring in areas of concentrated use. A planned network of trails and associated signage can also positively impact adjacent private landowners by decreasing the likelihood of trespass onto adjacent or nearby private property.

Reasonably foreseeable actions are listed in Section 3.1. The development of land for roads, pipelines, electrical transmission, minerals, etc. could remove or restrict public access or impact visitors' recreational experiences, though these impacts would generally be only temporary during construction and/or other times to protect public safety. However, the impacts are expected to be relatively minor due to the large extent of land available for recreation in the AA and the application of design features and mitigation measures (e.g., siting considerations, avoidance measures). Other types of reasonably foreseeable actions identified in Section 3.1 are not expected to cause a substantial impact to the recreation setting or visitors' recreational experiences, or would avoid substantial impacts through application of design features and mitigation measures (e.g., siting considerations, avoidance measures). While there would be some impacts to visitors' recreational experiences and the recreation setting from the proposed action, and some potential impacts from present and reasonably foreseeable actions, these impacts would not be expected to increase effects to levels that would compromise the overall availability of recreation opportunities within the AA.

3.4 Visual Resources

3.4.1 Affected Environment

The AA occurs within VRM Class II (approximately 75 acres in Rose and Yellow Fork Canyons, and all lands above 5,200 ft elevation within the NOMA), Class III (lands below 5,200 ft elevation in the NOMA), and VRM Class IV (the Lake Mountains and majority of Rose and Yellow Fork Canyons).

The objective of VRM Class II areas is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The objective of VRM Class III areas is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The objective of VRM Class IV areas is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements (BLM 1986).

3.4.2 Impacts

3.4.2.1 Alternative A – No Action

The no action alternative would not contribute to any impacts for visual resources. No new trails would be constructed, but use would continue on existing trails.

3.4.2.2 Alternative B – Proposed Action

A Visual Contrast Rating (VCR) (BLM 1986) would be conducted for proposed centerline alignments in VRM Class II areas (Appendix C) to assist in determining final layout of each trail, incorporating information from the most recent visual resources inventory (BLM 2011) at appropriate key observation points. Additional information is shown in Figure 2.

Trails are linear features that have the potential to disrupt the existing form, line, color and texture of the landscape. Additionally, people using the trails will be visible from key observation points along nearby roads, trailheads, or residences, unless topographical features or vegetation is present in a location that provides screening. In the benchlands of the NOMA and the Lake Mountains, it is reasonable to expect that trails will be visible from residential developments, but that the application of protective measures will assist in screening to the greatest practical extent. In Rose and Yellow Fork Canyons, vegetation will generally screen trail users except in open clearings.

The placement of trails would avoid breaking the visual horizon wherever possible. Trails would flow with natural topography to the greatest extent practicable, and be designed to minimize contrast to the form, line, color and texture of the existing landscape. Implementation of these protective measures would mitigate impacts to visual resources and ensure that trail and infrastructure construction and maintenance is consistent with the established VRM Class objectives.

Reasonably foreseeable actions are listed in Section 3.1. Very few other actions are expected to occur in VRM Class II areas in the NOMA. The development of land for roads, pipelines, electrical transmission, minerals, etc. generally impacts the visual characteristics of the landscape. Overall impacts to visual resources are expected to be relatively minor due to the application of design features and mitigation measures (e.g., siting considerations, avoidance measures). While there would be some impacts to visual resources from the proposed action and some potential impacts from present and reasonably foreseeable actions, these impacts would not be expected to increase effects to levels that would compromise the scenic quality ratings of lands within the AA.

3.5 Lands and Access

3.5.1 Affected Environment

The AA contains twenty-eight (28) existing/operating rights-of-way (ROWs) (Table 5). Most of these authorizations are linear features, which include power/transmission lines, water or gas pipelines, access roads, etc. There are also several storage areas and water tanks authorized on public lands. Several of these ROWs are considered major utility ROWs, providing services across Utah.

Table 5. Linear Rights-of-Ways.

Factor	Number of ROW	Approximate miles (+/-)*
1. NOMA	9	8.2 miles
2. Rose and Yellow Fork Canyons	6	1.5 miles
3. Lake Mountains	13	20.3 miles

There are certain parcels (acres) of land that are specifically identified in the Dingell Act and NDAA that are to be exchanged between SITLA and BLM ownership.

Section 1005 of the Dingell Act provides for the State of Utah to make selections for State land grants within certain BLM-administered lands in Utah County. On June 26, 2020, SITLA formally requested the conveyance of the following BLM lands with the Lake Mountains planning area under this provision of the Dingell Act. This case has been assigned BLM serial number UTU-94842.

Township 6 South, Range 1 West, SLB&M
 Section 8: Lots 3, 4, 7, 8, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 10:
 E $\frac{1}{2}$ NE $\frac{1}{4}$
 Containing 483.20 acres, m/l

Section 1255 of the Dingell Act provides for the exchange of specifically identified state trust lands and BLM-administered lands in the State of Utah, including 261.53 acres of BLM-administered land within the Lake Mountains planning area. The act states “If the State offers to convey to the United States title to the non-Federal land, the Secretary, in accordance with this section, shall (A) accept the offer; and (B) on receipt of all right, title, and interest in and to the non-Federal land, convey to the State (or a designee) all right, title, and interest of the United States in and to the Federal Land.” On August 3, 2020, the State of Utah, through SITLA, formally offered to convey title to the non-Federal lands in the exchange to the United States via letter submitted to the Secretary of the Interior, thereby officially setting this congressionally mandated exchange in motion. The BLM-administered lands within the Lake Mountains planning area that will be conveyed to SITLA under the Dingell Act are as follows:

Township 6 South, Range 1 West, SLB&M
 Section 4: Lots 1-7, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$
 Containing 261.53 acres, m/l

Sections 3011-3014 of the NDAA provides for the exchange of specifically identified state trust lands and BLM-administered lands in the State of Utah. This exchange, known as the Utah Test and Training Range/West Desert Land Exchange (“UTTR Exchange”), includes 215.05 acres of BLM administered lands adjacent to the NOMA planning area as described below:

Township 3 South, Range 4 West, SLB&M
 Section 11: Lots 1-7, N½NE½ [less patented mining claims]
 Containing 215.05 acres, m/l

Implementation of the congressionally mandated UTTR Exchange is nearing completion. A binding exchange agreement was executed between SITLA and the BLM on November 3, 2020, locking in the lands to be exchanged and the valuation of those lands.

3.5.2 Impacts

3.5.2.1 Alternative A – No Action

The existing ROWs would remain in their present status and any new applications would be analyzed independently on a case-by-case basis. The BLM would not grant any new ROWs for trails nor associated infrastructure. The no action alternative would not contribute to any impacts for lands. Land exchanges as identified in the Dingell Act and NDAA would still proceed.

3.5.2.2 Alternative B – Proposed Action

The BLM would consider additional rights-of-way to municipalities to authorize the construction and maintenance of some or all of the trails. No impacts to existing right-of-way holders or other authorized users are anticipated, as valid existing rights would be recognized. Protective measures would be applied (Appendix C), which would mitigate impacts to the lands and realty resource and to valid existing rights.

Reasonably foreseeable actions are listed in Section 3.1. It is possible that reasonably foreseeable future land tenure changes (e.g., federal or SITLA to private ownership) could remove or limit access to lands available for land use authorizations, as the future landowner may not permit access or land use authorizations. Similarly, the development of land for roads, pipelines, electrical transmission, etc. may limit future access or future authorizations, if those types of development are incompatible with the proposed uses of the trail network or require exclusive use.

Land exchanges as identified in the Dingell Act and NDAA would also proceed under this alternative. Any applications for ROWs proposing trail development on lands within or adjacent to parcels identified for exchange or conveyance would either be authorized in coordination with SITLA, or not considered. While the type and magnitude of these impacts cannot currently be quantified, land tenure changes, such as parcels slated to be transferred to SITLA, and the development of land in the AA are expected to continue and have potential to reduce access and/or limit lands available for land use authorizations within the AA. However, the impacts are expected to be relatively minor due to the large extent of land available for public access and land use authorizations in the AA and the application of design features and mitigation measures (e.g., siting considerations, avoidance measures).

3.6 Wildlife/Migratory Birds/Special Status Species

3.6.1 *Affected Environment*

The majority (96%) of wildlife habitat on public lands in the AA consists of seven land cover types: sagebrush (9,071 acres), pinyon-juniper (5,736 acres), non-native grassland (3,644 acres), forest and woodland (2,916 acres), montane shrubs (1,065 acres), grassland (453 acres), and desert shrubs (354 acres). The distribution of habitat types varies between the three geographically distinct areas.

The NOMA has a large component of nonnative grasses as well as forest and woodland, sagebrush, and pinyon-juniper; the Rose and Yellow Fork Canyons are largely pinyon-juniper with smaller areas of sagebrush and nonnative grasses; and the Lake Mountains are dominated by sagebrush with substantial areas of pinyon juniper and nonnative grasslands (Table 9 through Table 11 in Section 3.7). Riparian habitat is rare (0.2 percent) and is primarily located in the NOMA. Habitat quality varies across the AA; in many areas non-native species, such as cheatgrass and noxious weeds, are invading. Native species (pinyon-juniper) are encroaching into native shrub habitats and are degrading and fragmenting the habitat, as well as changing the frequency and intensity of fires. The NOMA and Lake Mountains support the largest areas of nonnative grasses. Other historic and/or ongoing uses influencing the quality and distribution of wildlife habitats in the AA are fencelines, powerlines, fires, hazardous fuels, habitat restoration treatments and seedings, roads, recreational use, and mining. Developments on nearby private lands affect the quality and availability of wildlife habitats in the project vicinity because they reduce and fragment habitat, in addition to creating noise disturbances and traffic hazards. A large (>8,000 acre) open pit copper mine is located on private surface between the NOMA and Rose and Yellow Fork Canyons area. Urbanization from the rapidly growing Tooele Valley, Salt Lake Valley, and Utah Valley areas is encroaching on wildlife habitats on adjacent private lands.

Migratory Birds

A variety of migratory songbird species use habitats within the AA for breeding, nesting, foraging, and migratory habitats. Migratory birds are protected under the MBTA. The MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products, unless it is a permitted action. The Executive Order 13186 sets forth the responsibilities of federal agencies to further implement provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that federal actions evaluate the effects of proposed actions and agency plans on migratory birds.

BLM's role under the MBTA is to adequately manage migratory birds and their habitats, and to reduce the likelihood of a sensitive bird species from being listed under the ESA.

In addition, a Memorandum of Understanding (MOU) between the BLM and United States Fish and Wildlife Service (USFWS) (BLM, 2010) provides BLM further direction for project-level NEPA guidance for meeting MBTA conservation and compliance. The emphasis is on the identification of sensitive bird species and habitats using the USFWS 2008 Birds of Conservation Concern (BCC) (USFWS, 2008), the Utah Partners in Flight (UPIF) (Parrish, 2002), (BLM, 2010) that avoid, minimize, and mitigate adverse impacts for migratory birds and habitats that are most likely to be present in the AA.

The AA is within the Great Basin Bird Conservation Region (USFWS, 2008). Priority species that could occur within the parcels were identified by the BCC lists for this region (USFWS, 2008), UPIF Priority Species List (Parrish, 2002), Raptor Inventory Nest Survey database (RINS, 2018), Utah Natural Heritage Database (UDWR, 2013), Breeding Bird Survey records (Pardieck, 2018), and eBird records (eBird, 2020). Table 6 lists the 17 non-sensitive priority bird species potentially occurring within the AA. BLM sensitive bird species are discussed in the subsection on *Special Status Terrestrial Species*.

Table 6. Potentially Occurring Priority Bird Species (Non-Sensitive).

Common Name	Scientific Name	Status	1st Breeding	2nd Breeding	Wintering Habitat
Black Rosy-Finch	<i>Leucosticte atrata</i>	BCC	Alpine	Alpine	Grassland
Black-throated Gray Warbler	<i>Setophaga nigrescens</i>	UPIF	Pinyon-Juniper	Mountain Shrub	Migrant
Brewer's Sparrow	<i>Spizella breweri</i>	BCC, UPIF	Shrubsteppe	High Desert Scrub	Migrant
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	UPIF	Lowland Riparian	Mountain Riparian	Migrant
Calliope Hummingbird	<i>Selasphorus calliope</i>	BCC	Mountain Riparian	Mountain Shrub	Migrant
Flammulated Owl	<i>Psilosops flammeolus</i>	BCC	Ponderosa Pine	Sub-Alpine Conifer	Lowland Riparian
Golden Eagle	<i>Aquila chrysaetos</i>	BCC, BGEPA	Cliff	High Desert Scrub	High Desert Scrub
Gray Vireo	<i>Vireo vicinior</i>	BCC, UPIF	Pinyon-Juniper	Northern Oak	Migrant
Green-tailed Towhee	<i>Pipilo chlorurus</i>	BCC	Mountain Shrub	High Desert Scrub	Migrant
Loggerhead Shrike	<i>Lanius ludovicianus</i>	BCC	High Desert Scrub	Pinyon-Juniper	High Desert Scrub
Peregrine Falcon	<i>Falco peregrinus</i>	BCC	Cliff	Lowland Riparian	Wetland
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	BCC	Pinyon-Juniper	Ponderosa Pine	Pinyon-Juniper
Sagebrush Sparrow	<i>Artemisiospiza nevadensis</i>	BCC, UPIF	Shrubsteppe	High Desert Shrub	Low Desert Shrub
Sage Thrasher	<i>Oreoscoptes montanus</i>	BCC	Shrubsteppe	High Desert Shrub	Migrant
Virginia's Warbler	<i>Leiothlypis virginiae</i>	BCC, UPIF	Northern Oak	Pinyon-Juniper	Migrant
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>	BCC	Sub-Alpine Conifer	Aspen	Migrant
Willow Flycatcher	<i>Empidonax traillii</i>	BCC	Lowland Riparian	Mountain Riparian	Migrant

Sixty-three percent of the AA provides Priority Bird Habitat (Parrish, 2002), specifically shrubsteppe, pinyon-juniper, desert scrub, and riparian habitats. Nine percent of the AA is within Bird Habitat Conservation Areas (BHCA), specifically the Utah Lake/Mona Lake/Tintic Valley and Rush Valley/Tooele Valley BHCAs (Evans, 2008).

Special Status Terrestrial Species

Special Status Animal Species include the following: federally threatened, endangered, proposed, or candidate species, and BLM sensitive species. Section 7 of the ESA requires BLM land managers to ensure that any action authorized, funded, or carried out by the BLM is not likely to jeopardize the continued existence of any threatened or endangered species.

Consultation with USFWS is required on any action authorized by the BLM or another federal agency that affects a listed species or that jeopardizes or modifies critical habitat.

The management of special status species is guided by the BLM 6840 Manual, Special Status Species Management (BLM, 2008). The objective of the 6840 Manual is: 1) to conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species, and 2) to initiate pro-active conservation measures that reduce or eliminate threats to BLM sensitive species to minimize the likelihood of and need for listing of these species under the ESA.

There are no federally listed or proposed terrestrial species or critical habitat occurring in the AA (USFWS, 2020). The IPaC report (USFWS 2020) listed two federally listed species to be considered in the effects analysis of the project, the yellow-billed cuckoo and the June sucker. However, there are no cuckoo records in the project area, nor is there suitable or critical cuckoo habitat. Riparian protective measures will eliminate any potential effects to the June sucker in Utah Lake. Therefore, no effects from the proposed project to these species are expected, and these species will not be considered further in this EA.

There are 20 terrestrial wildlife species that are designated sensitive by the BLM that potentially occur within the AA (Table 7).

Table 7. Potentially Occurring BLM Sensitive Species.

Species	Scientific Name	Status	Habitat
Birds			
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	SENS	Sub-alpine conifer, lodgepole pine.
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SENS	Lowland riparian
Burrowing Owl	<i>Athene cunicularia</i>	SENS	High desert scrub, grasslands
Ferruginous Hawk	<i>Buteo regalis</i>	SENS	Open country in a variety of habitats; isolated juniper trees
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	SENS	Grasslands
Lewis's Woodpecker	<i>Melanerpes lewis</i>	SENS	Ponderosa pine, lowland riparian.
Long-billed Curlew	<i>Numenius americanus</i>	SENS	Grasslands, desert shrub
Northern Goshawk	<i>Accipiter gentilis</i>	SENS	Mature mountain forests and riparian zones, aspen

Species	Scientific Name	Status	Habitat
Short-eared Owl	<i>Asio flammeus</i>	SENS	Wetland, grassland, shrubland
Insects			
Monarch Butterfly	<i>Danaus plexippus</i>	SENS	Mesic habitats supporting milkweed and nectar species.
Western Bumble Bee	<i>Bombus occidentalis</i>	SENS	Meadow complexes with a variety of habitats. Needs floral resources throughout breeding season and small mammal burrows.
Mammals			
Allen's Big-eared Bat	<i>Idionycteris phyllotis</i>	SENS	Lowland riparian and desert shrub to mountain brush and mixed forest.
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	SENS	lowland riparian, desert scrub, montane forest
Fringed Myotis	<i>Myotis thysanodes</i>	SENS	Many habitats with roost sites (caves, cliffs, mines, building, cavities in decadent trees and snags)
Kit Fox	<i>Vulpes macrotis</i>	SENS	Sparsely vegetated arid habitat
Preble's Shrew	<i>Sorex preblei</i>	SENS	Many habitats, especially wetland areas.
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	SENS	Areas of tall dense sagebrush with loose soils
Spotted Bat	<i>Euderma maculatum</i>	SENS	Many habitats with tall cliffs
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	SENS	Many habitats with roost sites (caves, cliffs, mines, building)
Western Red Bat	<i>Lasiurus blossevillii</i>	SENS	Cottonwood groves in lowland riparian

Non-Special Status Terrestrial Species

Mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus elaphus*), and pronghorn (*Antilocapra americana*) are the big game species found within the AA (Table 8). UDWR has identified areas of crucial habitats that are considered essential to the life history requirements of big game species, such that continued degradation and loss of crucial habitats would lead to declines in carrying capacity and/or numbers of big game species. In addition, recently UDWR has been radio-collaring deer in the Eagle Mountain area and using the location data to identify migration corridors (UDWR, 2020).

Table 8. Crucial Big Game Habitats Acreages.

Type	Total	NOMA	Rose/Yellowfork Canyons	Lake Mountains	Source
Mule Deer					
Crucial Winter	3,501	3,114	387	0	UDWR 2015
Crucial Yearlong	10,721	0	0	10,721	UDWR 2015
Migration Corridor - High Use	3,507	Not Available	Not Available	3,507	UDWR 2020
Migration Corridor - Medium Use	6,796	Not Available	Not Available	6,796	UDWR 2020
Migration Corridor - Low Use	3,493	Not Available	Not Available	3,493	UDWR 2020
Migration Corridor - Stopover	6,084	Not Available	Not Available	6,084	UDWR 2020

Type	Total	NOMA	Rose/Yellowfork Canyons	Lake Mountains	Source
Pronghorn					
Crucial yearlong	232	0	0	232	UDWR 2018
Elk					
Crucial winter	4,339	4339	0	0	UDWR 2013

The rapid urbanization in the Salt Lake, Tooele, and Utah Valleys has created human/deer conflicts in the region. The Eagle Mountain area has experienced high rates of deer/vehicle collisions along a deer migration corridor, and a cooperative effort to protect green spaces and create safe crossings is ongoing. In response to deer/human conflicts (property damage and vehicle collisions) in the town of Herriman, UDWR has instituted an extended archery hunt in the Rose and Yellow Fork Canyons portion of the AA to reduce the deer population.

Most of the AA (80 percent) is within either crucial winter or crucial yearlong mule deer habitats (UDWR, 2015) or within a migration corridor (UDWR, 2020) (Figure 3 and Figure 4). Migration corridor data is extracted from location records for deer that were radio-collared in the Eagle Mountain area, and so it only provides substantial information for the Lake Mountain area. Some of the collared Eagle Mountain deer do occur near or within the Rose and Yellow Fork Canyon area, but this appears to be the extreme northern end of the range for this population. Radio-collar data for adult does occurring (during the fawning season) near the southern portions of the Rose and Yellow Fork Canyons area suggest that this area may provide fawning habitat. Migration use of the AA by non-collared deer from the Eagle Mountain area or elsewhere is not known at this time. The AA within the NOMA provides some of the most important winter big game range in the Oquirrh Mountains.

Even though vegetative communities vary throughout the range of mule deer, habitat is nearly always characterized by areas of thick brush or trees interspersed with small openings. The thick brush and trees are used for escape and thermal cover, whereas the small openings provide forage and feeding areas. Mule deer do best in habitats that are in the early stages of plant succession (UDWR, 2019).

Eighteen percent of the project contains designated crucial winter range for elk, located entirely within the NOMA (UDWR, 2013) (Figure 5). Elk are a generalist ungulate, having a varied diet of grasses, forbs, and shrubs. Although elk inhabit most habitat types in Utah, they prefer to spend their summers at high elevations in aspen/conifer forests. Stands of aspen provide forage and cover and are used for calving in the spring. Water is an important habitat component for elk; in Utah, elk on summer ranges were found to prefer habitat within 0.33 miles of water. Elk will spend the winter months at mid to low elevation habitats that contain mountain shrub and sagebrush communities (UDWR, 2015).

The only designated pronghorn habitat in the AA is a small area (232 acres of crucial yearlong habitat) on the lower elevations of the west side of the Lake Mountains (UDWR, 2018) (Figure 6). This habitat is peripheral to the areas in the Cedar Valley that are used most heavily by pronghorn. In Utah, nearly all pronghorn populations occur in shrub-steppe habitat. Large expanses of open, low rolling, or flat terrain characterize the topography of most of these habitats. Of particular importance in sustaining pronghorn populations is a strong forb component in the vegetative mix. The presence of succulent forbs is essential to lactating does and thus fawn survival during the spring and early summer. High quality browse protruding above snow level is especially critical to winter survival of pronghorn (UDWR, 2017).

3.6.2 Impacts

3.6.2.1 Alternative A – No Action

Migratory Birds/Special Status Terrestrial Species/Non-special Status Terrestrial Species

Under the no action alternative current authorized actions would continue. There would be no new construction associated with newly authorized trails under the no action alternative. Current and ongoing actions on BLM lands, such as motorized and nonmotorized recreation, rights-of-way, mineral exploration/extraction, livestock grazing, and fuels reduction and habitat restoration projects would continue.

Under the no action alternative, impacts would be similar to those described in Section 3.6.1. Current use and management would not change; although increased urbanization of the Salt Lake, Tooele, and Utah Valleys would increase demand for construction materials, utility rights-of-way, and recreation, as well as increasing traffic in the region.

Reasonably foreseeable actions would continue to degrade migratory bird, sensitive species, and big game habitats, particularly the rapid urbanization of adjacent areas. The unauthorized expansion of trails into BLM lands is currently occurring and reasonably foreseeable, given the increasing demand for recreational opportunities in the area. These trails would likely not be constructed according to industry standards or be subject to protective measures to minimize damage to wildlife habitat or disturbances to wildlife. Unauthorized, user-created trails would likely cause more habitat loss and wildlife disturbance than the proposed action.

3.6.2.2 Alternative B – Proposed Action

Migratory Birds

The proposed action could result in the loss or degradation of up to 101 acres of migratory bird habitat as described in Sections 3.1 and 3.7.2.2. In addition, trails affect bird communities by increasing nest predation through increased corridors and causing disturbance effects (Miller et al. 1998), which result in altered bird community composition, favoring habitat edge species over habitat interior species. The zone of influence in the Miller study for most negatively affected species was 75 meters; although some species were affected as far as 100 meters away. Using these distances to estimate minimum and maximum areas of disturbance, and assuming the maximum distance of trail is developed in each area of the project, 3,262 to 4,351 acres of bird habitat in the entire AA would be subject to disturbance effects, or 14 to 18 percent overall. This area of disturbance is not distributed evenly among the three areas – the disturbed area in the smaller Rose and Yellow Fork Canyons area would represent 58 to 78 percent of that area. Seventeen to 22 percent of the NOMA and nine to 11 percent of the Lake Mountains would be affected. These are simplified estimates that calculate a maximum area of disturbance based

upon a straightline length of trail and do not take into account the fact that trail features, such as curves and switchbacks create overlapping areas of disturbance, therefore the total area affected may be lower than the straightline estimate. The estimates also do not take into account the influence of terrain features that could either buffer or increase disturbance effects.

Romin and Muck (2002) provides guidelines for raptor protection from human disturbances. Out-of-vehicle recreational activities are generally considered more disturbing to raptors than in-vehicle activities, although raptor tolerance levels can vary by species. Recommended spatial buffers for most nesting raptor species occurring within the AA range from 0.25 to 0.50 mile, although buffers for the less common peregrine falcon and bald eagle are 1 mile (Romin and Muck 2002). Raptor nesting inventories for the AA have not been performed. Assuming that the entire AA provides potential raptor nesting habitat and using the 0.25 to 0.50 mile buffer distances for the most commonly nesting raptors to estimate minimum and maximum areas of disturbance, 17,396 to 34,793 acres of raptor habitat in the AA would be subject to disturbance, or 72 to 144 percent overall. This area of disturbance is not distributed evenly among the three areas – the disturbed area in the smaller Rose and Yellow Fork Canyons area would represent 311 to 623 percent of that area. Ninety to 180 percent of the NOMA and 46 to 91 percent of the Lake Mountains would be affected. These are simplified estimates that calculate a maximum area of disturbance based upon a straightline length of trail and do not take into account the fact that trail features, such as curves and switchbacks, create overlapping areas of disturbance, and therefore the total area affected may be lower than the straightline estimate. The estimates also do not take into account the influence of terrain features that could either buffer or increase disturbance effects.

Resource protective measures in Appendix C would minimize the risk of direct injury, mortality, or nest loss due to construction of new recreation developments. These measures would also minimize the risk of habitat loss or disturbance to nesting pinyon-jay due to construction of new roads and trailheads, as recommended in the Conservation Strategy for the Pinyon Jay (*Gymnorhinus cyanocephalus*) (Somershoe *et al.* 2020). In addition, the development of a maintained trail system would discourage cross-country travel in the AA. This would potentially reduce habitat loss from the proliferation of unauthorized substandard trails as well as minimize disturbances from recreational use. Some bird species can habituate to regular activity, such as along trails, but react more strongly to more irregular and unpredictable activity, such as in off-trail areas (Knight and Miller 1996).

The AA for migratory bird species is all of the Great Basin Bird Conservation Region within Tooele, Utah, and Salt Lake counties (USFWS 2008). Reasonably foreseeable actions are listed in Section 3.1. In addition, the rapid urbanization of the adjacent areas of the Tooele, Salt Lake, and Utah valleys is expected to continue – in the 20 years between 2015 and 2035 the populations of Salt Lake, Tooele, and Utah Counties are projected to increase by approximately 24, 62, and 64 percent, respectively (Perlich *et al.* 2017). This would result in the development of large areas of currently rural land, higher demands for utility rights-of-way, increased demands for construction materials, increasing pressure on undeveloped lands for recreation, and associated increases in vehicle traffic along nearby roads, all of which would negatively affect local migratory bird populations.

Overall, the project would add to the effects of historical and ongoing activities in the AA that have degraded habitat and created disturbances to migratory bird species. Relative to the areas affected by foreseeable actions within the AA (Section 3.7.2.2) and the adjacent rapidly urbanizing areas, the area of migratory bird habitat directly affected by the project (101 acres) is a relatively small area. Complete implementation of project design features to mitigate impacts to migratory bird species would reduce the project's long-term effects to the point that effects would not be expected to compromise the viability of these species within the AA.

Special Status Terrestrial Species

The proposed action could result in the loss or degradation of up to 101 acres of sensitive species habitat as described in Section 3.7.2.2. Sensitive bird species would be subject to disturbances by recreationists as described in the Migratory Bird subsection.

Resource protective measures in Appendix C would minimize the risk of direct injury, mortality, or nest loss due to construction of new recreation developments. Prioritization of the bat-compatible closure of any future newly identified abandoned mine land (AML) features within the AA would reduce the risk of disturbances to sensitive bat species from recreational users. Pre-construction surveys and avoidance buffers would minimize risks to pygmy rabbits and kit foxes from the installation of the proposed facilities, although risks from noise and habitat disturbances from recreational users would continue. The development of a maintained trail system would discourage cross-country travel in the AA. This would reduce habitat loss from the proliferation of unauthorized substandard trails as well as minimizing disturbances from recreational use. Some wildlife species can habituate to regular activity, such as along trails, but react more strongly to more irregular and unpredictable activity, such as in off-trail areas (Knight and Miller 1996).

The AA for special status species is all of the Great Basin Bird Conservation Region within Tooele, Utah, and Salt Lake counties (USFWS 2008). Reasonably foreseeable future actions are listed in Section 3.1. In addition, the rapid urbanization of the adjacent areas of the Tooele, Salt Lake, and Utah valleys is expected to continue – in the 20 years between 2015 and 2035 the populations of Salt Lake, Tooele, and Utah Counties are projected to increase by approximately 24, 62, and 64 percent, respectively (Perlich et al, 2017). This would result in the development of large areas of currently rural land, higher demands for utility rights-of-way, increased demands for construction materials, increasing pressure on undeveloped lands for recreation, and associated increases in vehicle traffic along nearby roads, all of which would negatively affect sensitive species populations.

Overall, the project would add to effects to historical and ongoing activities in the AA that have degraded habitat and created disturbances to sensitive wildlife species. Relative to the areas affected by foreseeable actions within the AA (Section 3.7.2.2) and the adjacent rapidly urbanizing areas, the area of sensitive species habitat directly affected by the project (101 acres) is a relatively small area. Complete implementation of project design features to mitigate impacts to sensitive species would reduce the project's additive effects to the point that effects would not be expected to compromise the viability of these species within the AA.

Non-Special Status Terrestrial Species

The proposed action could result in the loss or degradation of up to 101 acres of big game habitat as described in Section 3.7.2.2. In addition, big game would be subject to disturbances caused by recreationists using the AA. Knight and Miller (1996) found that pedestrians using trails caused deer to flush at distances of up to 33 meters; pedestrians with dogs on trails caused deer to flush at distances up to 120 meters. Using these distances to estimate minimum and maximum areas of disturbance, 1,435 to 2,607 acres of mule deer habitat in the AA would be subject to disturbance effects, or six to ten percent overall. This area of disturbance is not distributed evenly among the three areas – the disturbed area in the smaller Rose and Yellow Fork Canyons area would represent 26 to 47 percent of that area. Seven to 13 percent of the NOMA and four to seven percent of the Lake Mountains would be affected. These are simplified estimates that calculate a maximum area of disturbance based upon a straightline length of trail and do not take into account the fact that trail features, such as curves and switchbacks, create overlapping areas of disturbance, and therefore the total area affected may be lower than the straightline estimate. The estimates also do not take into account the influence of terrain features that could either decrease or increase disturbance effects. Knight and Miller (1996) did not specifically look at seasonal variation in mule deer sensitivity to disturbance. The AA includes crucial winter range, migration corridors, and fawning areas. Disturbances to deer during these sensitive periods could have greater impacts over larger areas than was observed by their study.

The development of a maintained trail system would discourage cross-country travel in the AA. This would reduce habitat loss from the proliferation of unauthorized substandard trails as well as minimizing disturbances from recreational use. Knight and Miller (1996) demonstrated that deer react sooner and more strongly to off-trail recreational use than to on trail use.

The AA for non-special status terrestrial species includes all big game habitat management units that overlap the AA (West Desert and Oquirrh-Stansbury). Reasonably foreseeable actions are listed in Section 3.1. In addition, the rapid urbanization of the adjacent areas of the Tooele, Salt Lake, and Utah valleys is expected to continue – in the 20 years between 2015 and 2035 the populations of Salt Lake, Tooele, and Utah Counties are projected to increase by approximately 24, 62, and 64 percent, respectively (Perlich et al. 2017). This would result the development of large areas of currently rural land, higher demands for utility rights-of-way, increased demands for construction materials, increasing pressure on undeveloped lands for recreation, and associated increases in vehicle traffic along nearby roads, all of which will negatively affect big game populations.

The development of trails and access on BLM lands in the Rose and Yellow Fork Canyons area would contribute to the efficiency of ongoing deer control efforts for the town of Herriman and reduce the population of deer in this area.

Overall, the project would add to effects of historical and ongoing activities in the AA that have degraded habitat and created disturbances to big game species. Relative to the areas affected by foreseeable actions within the AA (Section 3.7.2.2) and the adjacent rapidly urbanizing areas, the area of big game habitats directly affected by the project (101 acres) is a relatively small area. Complete implementation of project design features to mitigate impacts to big game species would reduce the project's additive effects to the point that effects would not be expected to compromise the viability of these species within the AA.

3.7 Vegetation

3.7.1 Affected Environment

Because vegetation varied substantially from site to site, a breakdown of landcover at each location is detailed below.

NOMA

Forests and woodlands are the dominant vegetation cover type on the NOMA covering approximately 45% of the area, followed by grasslands at 32% and shrublands at 20% (Table 9). The NOMA was historically homesteaded and now consist primarily of non-native annual and perennial grasslands. The other common landcover types are Gambel Oak (25.4%), pinyon-juniper woodland (10.7%), and Wyoming big sagebrush (9.4%).

Table 9. NOMA - Vegetation Land Cover.

Landcover	Acres on BLM-managed Public Lands	Percent
Forest and Woodland Cover Types (45.4%)		
Aspen/Maple Woodland and Forest	427.7	8.1
Gambel Oak Woodlands	1,343.3	25.4
Mixed Conifer Forest	64.3	1.2
Pinyon-juniper Woodland	566.2	10.7
Shrub Cover Types (19.9%)		
Wyoming Big Sagebrush Steppe	495.9	9.4
Mixed Mountain Shrubland	306.9	5.8
Mountain Mahogany Shrubland	50.3	1.0
Semi-desert Mixed Shrubland	65.8	1.2
Salt Desert Shrubland	1.3	<0.1
Low/Black Sagebrush Steppe	132.8	2.5
Grass Cover Types (32.1%)		
Grassland	126.1	2.4
Non-native Annual and Perennial Grassland	1,571.4	29.7
Other Cover Types (2.5%)		
Human Disturbance	50.0	0.9
Recently Burned	16.9	0.3
Wetland or Riparian	50.9	1.0
Barren	16.9	0.3
TOTAL	5,284.1	100%
Any acreage discrepancies are due to tessellation of raster datasets. Landcover is based on Landfire (www.landfire.gov) data from satellite imagery 2014. Landfire vegetation cover descriptions can be found at: https://www.landfire.gov/documents/LF-GAPMapUnitDescriptions.pdf		

Lake Mountains

Shrubland and shrubland steppe are the dominant vegetation cover type on the Lake Mountains, covering approximately 54% of the area, followed by forests at 28% and grasslands at 14% (Table 10). The Lake Mountains have been impacted by several wildfires over the past decade, but still retain substantial woody vegetation that is susceptible to, or intolerant of, fire. The most common landcover types are Wyoming big sagebrush (38.8%), pinyon-juniper woodland (23.4%), and non-native annual and perennial grasslands (11.9%).

Table 10. Lake Mountains - Vegetation Land.

Landcover Type	Acres on BLM-managed Public Lands	Percent
Forest and Woodland Cover Types (28%)		
Aspen/Maple Woodland and Forest	12.5	<0.1
Gambel Oak Woodlands	155.5	0.9
Mixed Conifer Forest	633.4	3.7
Pinyon-juniper Woodland	4,048.7	23.4
Shrub Cover Types (53.9%)		
Wyoming Big Sagebrush Steppe	6,709.9	38.8
Mixed Mountain Shrubland	263.8	1.5
Mountain Mahogany Shrubland	438.8	2.5
Semi-desert Mixed Shrubland	179.9	1.0
Salt Desert Shrubland	106.1	0.6
Greasewood Shrubland	4.0	<0.1
Low/Black Sagebrush Steppe	1,641.7	9.5
Grass Cover Types (13.8%)		
Grassland	323.1	1.9
Non-native Annual and Perennial Grassland	2,051.2	11.9
Other Cover Types (4.2%)		
Human Disturbance	64.7	0.4
Recently Burned	652.3	3.8
Wetland or Riparian	1.6	<0.1
Barren	13.6	<0.1
TOTAL	17,301.2	100%
Any acreage discrepancies are due to tessellation of raster datasets. Landcover is based on Landfire (www.landfire.gov) data from satellite imagery 2014. Landfire vegetation cover descriptions can be found at: https://www.landfire.gov/documents/LF-GAPMapUnitDescriptions.pdf		

Rose and Yellow Fork Canyons

Forests and woodlands are the dominant vegetation cover type in Rose and Yellow Fork Canyons covering approximately 92% of the area, followed by a scant amount of shrublands (6%) and grasslands (2%) (Table 11). The most common landcover types are pinyon-juniper woodlands (73.5%), Gambel oak woodlands (16.5%), and Wyoming Big Sagebrush Steppe (4.3%).

Table 11. Rose and Yellow Fork Canyons - Vegetation Land Cover.

Landcover Type	Acres on BLM-managed Public Lands	Percent
Forest and Woodland Cover Types (91.8%)		
Aspen/Maple Woodland and Forest	26.9	1.8
Gambel Oak Woodlands	252.2	16.5
Pinyon-juniper Woodland	1,120.9	73.5
Shrub Cover Types (6.2%)		
Wyoming Big Sagebrush Steppe	66.1	4.3
Mixed Mountain Shrubland	<1	<0.1
Mountain Mahogany Shrubland	5.3	0.3
Semi-desert Mixed Shrubland	1.1	<0.1
Low/Black Sagebrush Steppe	25.1	1.6
Grass Cover Types (1.6%)		
Grassland	3.6	0.2
Non-native Annual and Perennial Grassland	21.8	1.4
Other Cover Types (<1%)		
Human Disturbance	<1	<0.1
Wetland or Riparian	1.3	<0.1
TOTAL	1,525.2	100%
Any acreage discrepancies are due to tessellation of raster datasets. Landcover is based on Landfire (www.landfire.gov) data from satellite imagery 2014. Landfire vegetation cover descriptions can be found at: https://www.landfire.gov/documents/LF-GAPMapUnitDescriptions.pdf		

3.7.2 Impacts

3.7.2.1 Alternative A – No Action

Under this alternative, the BLM would not authorize the development of any new trails. There would be no expected loss of vegetation due to the implementation of the no action alternative. There would be no expected loss of riparian/aquatic habitats or impacts to water quality due to the implementation of the no action alternative.

3.7.2.2 Alternative B – Proposed Action

The proposed actions could result in the loss of up to approximately 33 acres of vegetation in the NOMA, 49 acres in the Lake Mountains, and 25 acres in Rose and Yellow Fork Canyon for a grand total of 107 acres (Table 12). In the NOMA, it is likely to be a loss of woodland, either Gambel oak or pinyon-juniper, and a loss of invasive and non-native grassland. In the Lake Mountains, it is likely to be a loss of Wyoming big sagebrush, pinyon-juniper woodland and invasive, non-native grassland. In Rose and Yellow Fork canyons, it is also likely to be a loss of woodlands including Gambel oak and pinyon-juniper.

All three of these areas are adjacent to population centers where demand for public forest resources is highest. However, the total acres likely to be removed is small, and there are no current harvest units on public lands in the AAs. Therefore, there would be limited anticipated impact to forest resources in the foreseeable future.

The possible indirect impacts of the proposed action are: trampling of additional vegetation along the trail corridor by livestock and trail users, changes in microclimate after trail construction (i.e., small changes in temperature, moisture and nutrient flow from alteration of existing vegetation and soil), soil compaction impacts on future plant establishment, nutrient loading due to spread of manure and urine by livestock and trail users, and the introduction and spread of invasive species along trails. All of these indirect impacts may cause a change in plant composition along the trail corridor (Dale & Weaver 1974, Benninger-Truax et al. 1992, Chen et al. 1999).

Plant species may be reduced/removed because they are delicate or because they are woody and not resistant to trampling (Dale & Weaver 1974, Cole 1978, Tonnesen & Ebersole 1997). Further, nutrient enrichment has been shown to change species composition, diversity and increase alien species (Wedin & Tilman 1996). So even though the corridor along the trails is not directly impacted by trail development, it may change substantially. However, outside the spread of non-native species, these impacts are generally within a meter or two from the trail (Dale & Weaver 1974, Van Winkle 2014).

Trails have also been shown to have higher densities of invasive species than random locations in the landscape (Davies et al. 2013) and to serve as conduits for plant movement (Benninger-Truax et al. 1992). Non-native, invasive plants often outcompete native vegetation (e.g., cheatgrass over native bunchgrasses). Trails facilitate the movement of invasive plant seeds into areas native vegetation, which can result in plant establishment, spread of invasive species and loss of native vegetation communities.

There may be loss of riparian vegetation at drainage crossings. Implementation of protective measures (Appendix C) would minimize these impacts. Trails would be constructed in a manner that a crossing runs perpendicular to a stream or drainage rather than parallel. A parallel crossing would increase streambank instability over a greater area as opposed to a crossing that intersects a stream or drainage at one point. Low wash crossings, bridges, or similar devices would be installed at crossings or as needed. Large overstory/canopy habitat would not be removed within the 1,200 foot buffer on either side of a stream. The grass/forb components of riparian habitat at a crossing could be lost due to an increase in recreation use. Approximately 53.8 acres of riparian habitat could be altered within the AA (Table 9 through Table 11).

Additional information is shown in Table 12.

Table 12. Impacts to Vegetation under the Proposed Action.

Area	Trail Construction	Parking Area/Rest Rooms/Kiosks	Access Road (1 per parking area)	Total Acres
NOMA	Up to 15 miles = 18.2 ac x 10 ft wide	Up to 2 = 10 ac 5 ac each	Up to 2,500 ft = 5.2 ac x 30 ft wide	33.4 ac
Lake Mountains	Up to 25 miles = 30.3 ac x 10 ft wide	Up to 3, = 15 ac 5 ac each	Up to 2,500 ft = 3.4 ac x 30 ft wide	48.7 ac
Rose/Yellow Fork Canyons	Up to 15 miles = 18.2 ac x 10 ft wide	Up to 1, = 5 ac 5 ac each	Up to 2,500 ft = 1.7 ac x 30 ft wide	24.9 ac
TOTALS	66.7 acres	30 acres	10.32 acres	107 ac

There are several current BLM-authorized activities within the AAs that impact vegetation (Table 13). The BLM hazardous fuels program has treated at least 1,600 acres in each of the units and approximately 5,600 acres total. Most treatments in the NOMA involved mowing (i.e., reducing the height and seed bank of annual rye grass), herbicide application, and seeding treatments in an effort to reduce the large amount of invasive, non-native grasslands due to historical uses. For Lake Mountains, a combination of treatments was implemented, including construction of fuel breaks, juniper mastication, and seeding. Last, for Rose and Yellow Fork Canyons, pinyon-juniper woodlands were thinned on BLM-administered lands surrounding private residences. The fuels program plans to continue treatments in the NOMA in the next several years and may implement treatment in the other AAs as required.

In addition to fuels treatments, wildfire has impacted almost 18,000 acres of vegetation across the AAs since 1984. In response, over 11,000 of those acres have been treated through the Emergency Stabilization and Rehabilitation (ESR) program to facilitate soil stability and recovery. Wildfires and ES&R treatments are unplanned, but would continue to occur. Other impacts to vegetation include rights-of-way (approximately 271 total acres) and livestock grazing activities. Both programs are expected to either increase (i.e., rights-of-way) or remain constant (i.e., livestock grazing).

Table 13. BLM Activities that Impact Vegetation.

Area	Fuels Treatments	ES&R Treatments	Wildfire Acres	Rights-of-way	Total Acres*
NOMA	2,156 acres	1,269 acres	1,269 acres 12 fires	42,966 ft = 20 acres X 20 ft wide	4,714 ac
Lake Mountains	1,665 acres	10,127 acres	16,718 34 fires	107,444 ft = 247 acres X 100 ft wide	28,757 ac
Rose/Yellow Fork Canyons	1,778 acres	Not Applicable	Not Applicable	7,756 ft = 4 acres X 20 ft wide	1,782 ac
TOTALS	5,599 acres	11,396 acres	17,987 acres	271 acres	35,253
*Some areas had multiple impacts. For example, some wildfires were seeded through the ES&R program. The proposed alternative will countervail the ongoing impacts to riparian vegetation and water resources that are caused by user-created substandard drainage crossings by directing users to drainage crossings that are designed to minimize impacts to these resources.					

Chapter 4. Consultation and Coordination

4.1 Persons, Groups, and Agencies Consulted

Persons, agencies, and organizations that were contacted or consulted during this EA are identified in Table 14.

Table 14. List of Contacts and Findings.

Name	Reason	Finding
<u>Salt Lake County</u> Salt Lake County Parks and Recreation, Martin Jensen, Division Director Walt Gilmore Planning Director: Jon Ruedas, Project Manager Herriman City Mayor David Watts	Coordination with City and County Government.	A coordination letter was sent to Cooperating Agencies on 6/10/2020. Follow-up video meeting was held on 6/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the “Project Mailing List” row below.
<u>Tooele County</u> Commissioner Kendall Thomas Commissioner Tom Tripp Commissioner Shawn Milne Tooele City Mayor, Debbie Winn Tooele County Parks and Recreation, Mark McKendrick & Darwin Cook Tooele County Health Department, Kim Clausing	Coordination with City and County Government.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 6/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the “Project Mailing List” row below.
<u>Utah County</u> Commissioner Bill Lee Commissioner Nathan Ivie City of Saratoga Springs, Mayor Jim Miller Eagle Mountain City, Mayor Tom Westmoreland Fairfield City, Mayor Bradley Gurney	Coordination with City and County Government.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 6/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the “Project Mailing List” row below.
Camp Williams, Paul Raymond	Coordination with Federal Agency.	A coordination letter was sent on 6/19/2020. Follow-up video meeting was held on 06/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the “Project Mailing List” row below.

Name	Reason	Finding
US National Park Service, Jill Jensen National Park Service Rivers, Trails and Conservation Assistance Program, Betsy Byrne	Coordination with Federal Agency.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 06/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the "Project Mailing List" row below.
Utah Public Lands Policy Coordinating Office, Kathleen Clarke	Coordination with State Government.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 06/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the "Project Mailing List" row below.
Utah Division of Wildlife Resources	Coordination with State Government.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 06/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. The big game biologist for the area was contacted by email on 9/3/2020 and his recommendations were incorporated. Refer also to the content provided in the "Project Mailing List" row below.
Utah School and Institutional Trust Lands Administration, Ben Stireman	Coordination with State of Utah - SITLA.	A coordination letter was sent on 6/10/2020. Follow-up video meeting was held on 06/25/2020. Comments were received and incorporated. CA information is summarized in Section 1.1. Coordination is ongoing. Refer also to the content provided in the "Project Mailing List" row below.
Utah Division of State History, State Historic Preservation Office, Chris Merritt	Consultation as required by NHPA (16 U.S.C. 470)	CA/CP information is summarized in Section 1.1. Consultation is ongoing.
Pueblo of Jemez, Skull Valley Band of Goshute, Confederated Tribe of Goshute, Paiute Indian Tribe of Utah, and Ute Indian Tribe.	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996) and NHPA (16 U.S.C. 470).	Invitations to consult letters were sent on 6/12/2020. Consultation/coordination is ongoing.

Name	Reason	Finding
		Refer also to the content provided in the “Project Mailing List” row below.
WDD Media List	Coordination with Media.	Press Releases were issued on 7/1/2020 for the initiation, scoping period, and comment period, respectively. Coordination is ongoing.
Project Mailing List.	Coordination with interested public.	A scoping period notification letter was mailed to rights-of-way holders, grazing permittees, and mineral authorization holders on 6/30/2020. The recipients were notified of a 15-day scoping period and were invited to submit issues and alternatives that should be considered in the EA. A comment period notification letter was sent on 12/9/2020. The recipients were notified of a 30-day comment period and were provided the link to the EA/unsigned FONSI on the NEPA register. Coordination is ongoing.

4.2 Public Participation

This project was posted on the NEPA Register on July 1, 2020. This was the initial public outreach that announced the project and SLFO’s intention to prepare an EA. Refer to Table 14 for a list of agencies, individuals, and organizations that were contacted and the corresponding findings from this analysis process.

Scoping Period

In addition to an update to the NEPA Register, a scoping period notification letter was sent to all members of the project mailing list on July 1, 2020. The SLFO ran a 15-day public scoping period (7/1/2020-7/16/2020) on the proposal and considered public input on issues and alternatives in preparing this EA.

Comment Analysis

The SLFO received 268 scoping comment letters from individuals, organizations, and government agencies. This information was utilized in preparing the content contained in Sections 1.5 through 1.5.2. Additional information is detailed in the Scoping Report (BLM 2020).

Comment Period

In addition to an update to the NEPA Register, a comment period notification letter was sent to all members of the project mailing list on December 9, 2020. The SLFO ran a 30-day public comment period on the content of the EA and unsigned FONSI (12/9/2020-1/8/2020). A Comment Report (reserved) or comment summary will be prepared. This report/summary will contain the public comments and BLM’s responses after the comment period concludes.

Comment Analysis

Reserved.

4.3 NHPA Compliance

The BLM utilized and coordinated the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470(f) pursuant to 36 CFR §800.2(d)(3)). The information about historic and cultural resources within the area potentially affected by the proposed project/action/approval will assist the BLM in identifying and evaluating impacts to such resources in the context of both NEPA and Section 106 of the NHPA. The BLM will consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies, if requested by any Tribe. If Tribal concerns are identified, including impacts on Indian trust assets and potential impacts to cultural resources, they will be given due consideration.

The following individuals/entities asked or were invited to be Consulting Parties:

- Utah Division of State History, State Historic Preservation Office
- Public Lands Policy Coordinating Office
- National Park Service, National Trails
- Utah Rock Art Research Association
- Utah Statewide Archaeological Society
- Utah Professional Archaeological Council
- National Pony Express Association – Utah
- Oregon-California Trail Association – Utah Crossroads Chapter
- Tooele County Historic Preservation Commission
- Preservation Utah
- Utah Division of Oil, Gas and Mining
- Utah Open Lands
- Pueblo of Jemez
- Hopi Tribe
- Confederated Tribes of the Goshute Reservation
- Skull Valley Band of the Goshutes
- Ute Indian Tribe

Consulting Parties met or conducted conference calls on: June 25, 2020.

4.4 Preparers

An IDT prepared the document and analyzed the impact of the proposed action upon the various resources (Table 15). They considered the affected environment and documented their assessment in the Interdisciplinary Team Checklist (Appendix B). Only those resources that would likely be impacted were carried forward into the body of the EA for further analysis.

Table 15. List of Preparers.

Name	Title	Responsible for the Following Section(s) of this Document
Pamela Schuller	Environmental Coordinator	Air Quality & Greenhouse Gas Emissions, Socioeconomics & Environmental Justice, NEPA Compliance
Michael Sheehan	Archaeologist	Cultural Resources, Native American Religious Concerns, NHPA Compliance
Roxanne Tea	Outdoor Recreation Planner	Areas of Critical Environmental Concern, National Historic Trails, Recreation, Travel / Transportation, Visual Resources, Wild and Scenic Rivers, Wilderness / WSA, Lands with Wilderness Characteristics
Brad Jessop	Fuels Natural Resource Specialist	Fuels/Fire Management
Nancy Williams	Wildlife Biologist	Greater Sage-Grouse Habitat, Migratory Birds, Threatened, Endangered, Candidate or Special Status Animal Species (Aquatic and Terrestrial)
Mark Williams	Natural Resource Specialist, Forester	Invasive Species, Noxious Weeds, Threatened, Endangered, Candidate or Special Status Plant Species, Woodland / Forestry, and Farmlands (Prime / Unique)
Kevin Kelley	Geologist	Geology, Mineral Resources, Energy Production, Paleontology
Emily Boivin	Realty Specialist	Lands, Access and Property Boundary Evaluation
Dylan Tucker	Range Conservationist	Livestock Grazing, Soils, Vegetation (Excluding Special Status Species)
Alan Jones	Physical Scientist/HazMat Specialist	Wastes (hazardous or solid)
Cassie Mellon	Aquatic Ecologist	Water Resources Quality, Wetlands / Riparian Zones & Floodplains

Refer also to the specialists as identified on the IDT Checklist (Appendix B).

Chapter 5. References, Acronyms/Abbreviations, & Appendices

5.1 References

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5.2 Acronyms/Abbreviations

AA	Analysis Area
AO	Authorized Officer
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ERMA	Extensive Recreation Management Area
ESR	Emergency Stabilization and Rehabilitation
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
H	Handbook
HQ	Headquarters
IB	Information Bulletin
IDT	Interdisciplinary Team
IM	Instruction Memorandum
NEPA	National Environmental Policy Act
NOMA	North Oquirrh Management Area
OHV	Off-Highway Vehicle
ORV	Off-Road Vehicle
PLPCO	Public Land Policy Coordinating Office
RMP	Resource Management Plan
SHPO	State Historic Preservation Office
SITLA	School and Institutional Trust Lands Administration
SLFO	Salt Lake Field Office
SO	Secretarial Order
SRMA	Special Recreation Management Area
SRP	Special Recreation Permits
UTSO	Utah State Office
VCR	Visual Contrast Rating
VRM	Visual Resource Management
WO	Washington Office

5.3 Appendices

- A. Figures (Maps)
- B. Interdisciplinary Team Checklist
- C. Protective Measures

Appendix A. Figures (Maps)

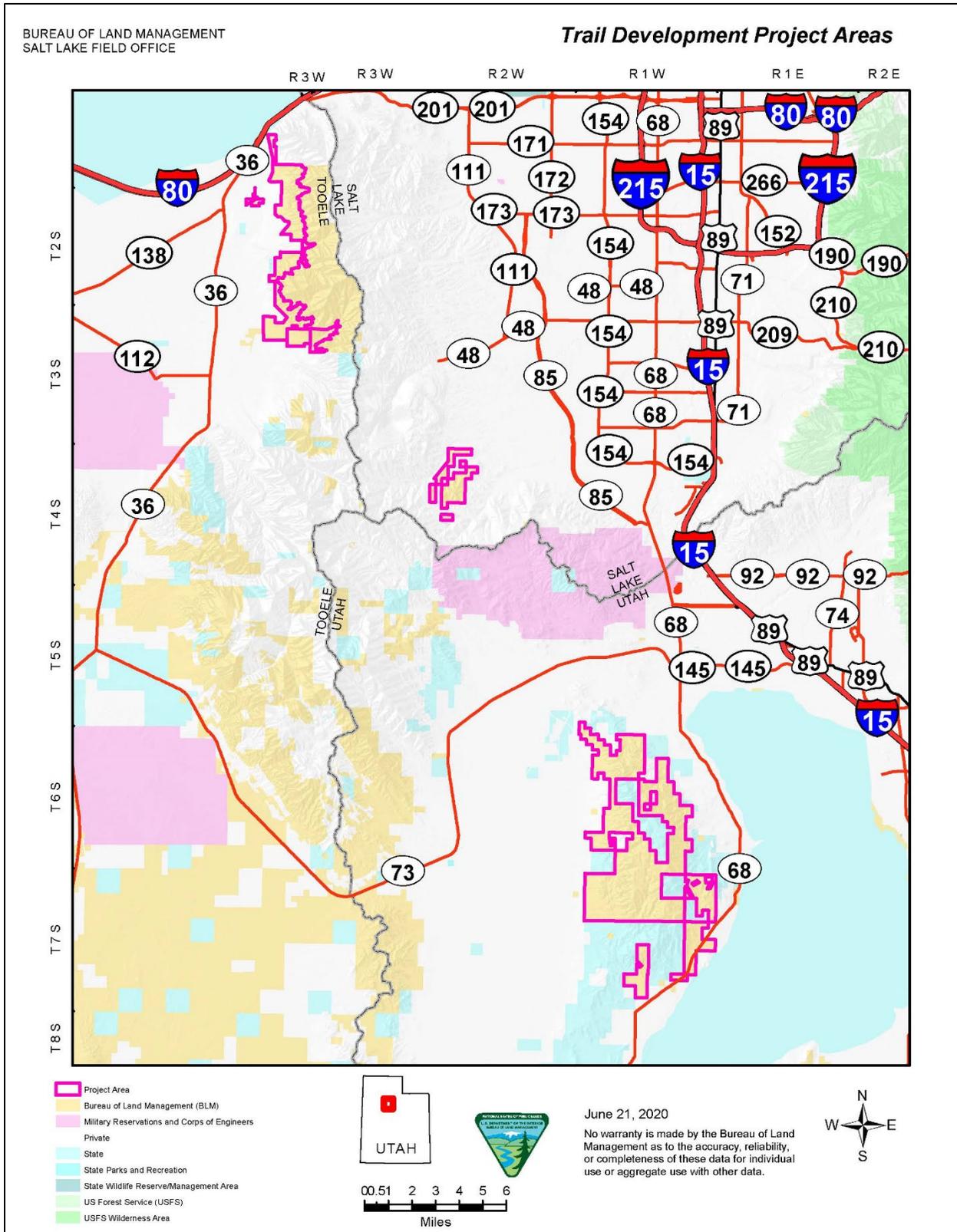


Figure 1. Analysis Area.

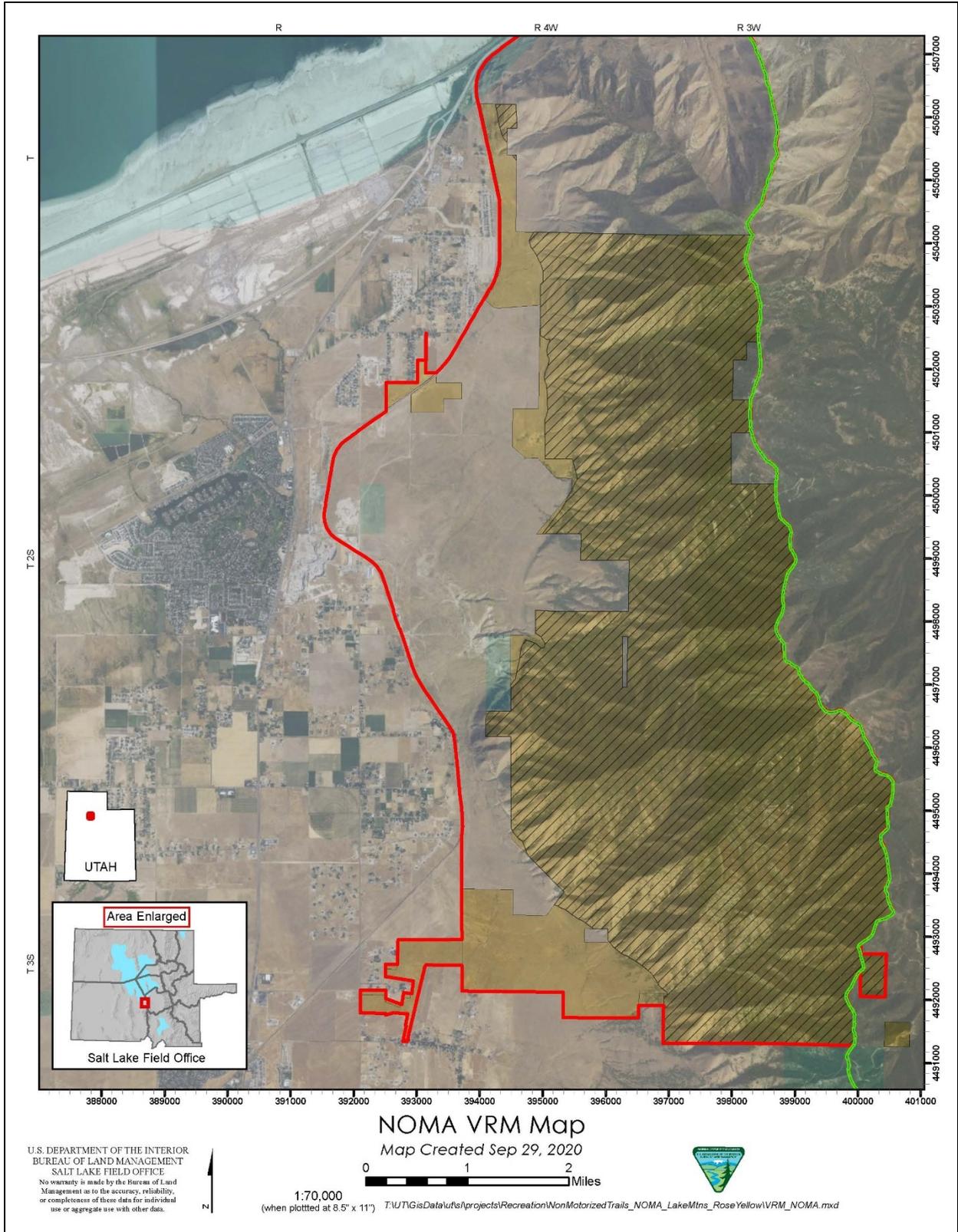


Figure 2. VRM Class II areas.

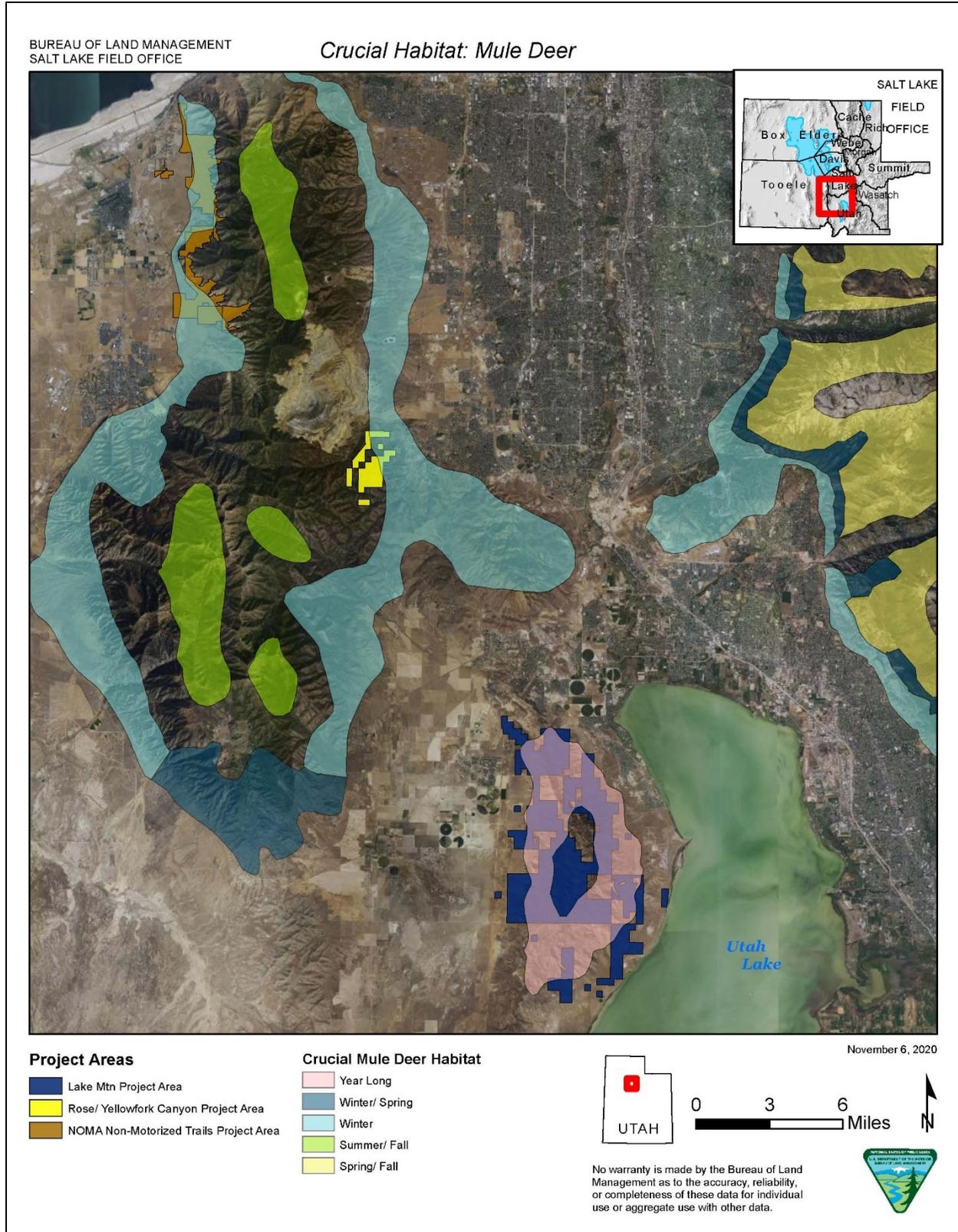


Figure 3. Crucial Mule Deer Habitat.

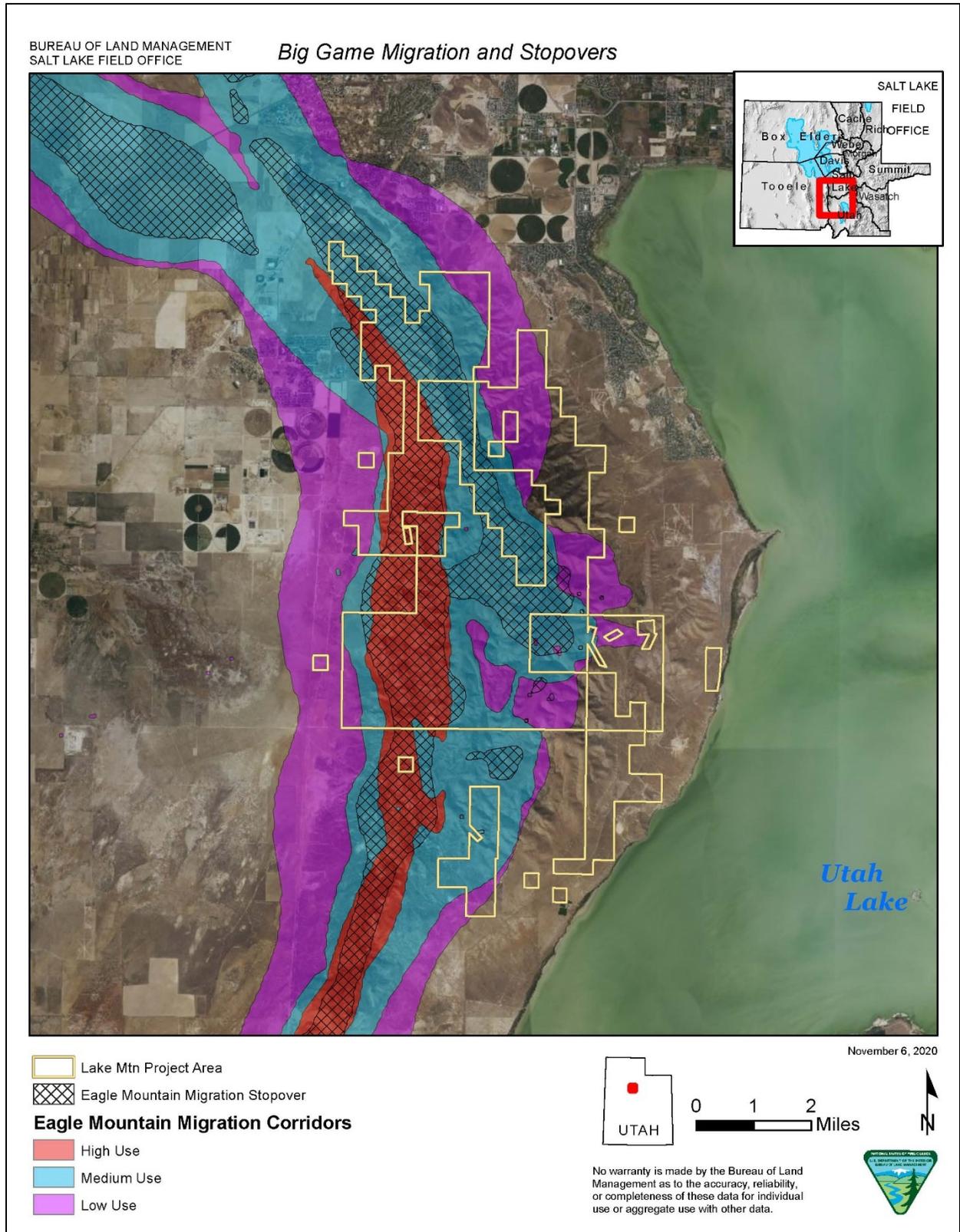


Figure 4. Big Game Migration and Stopovers.

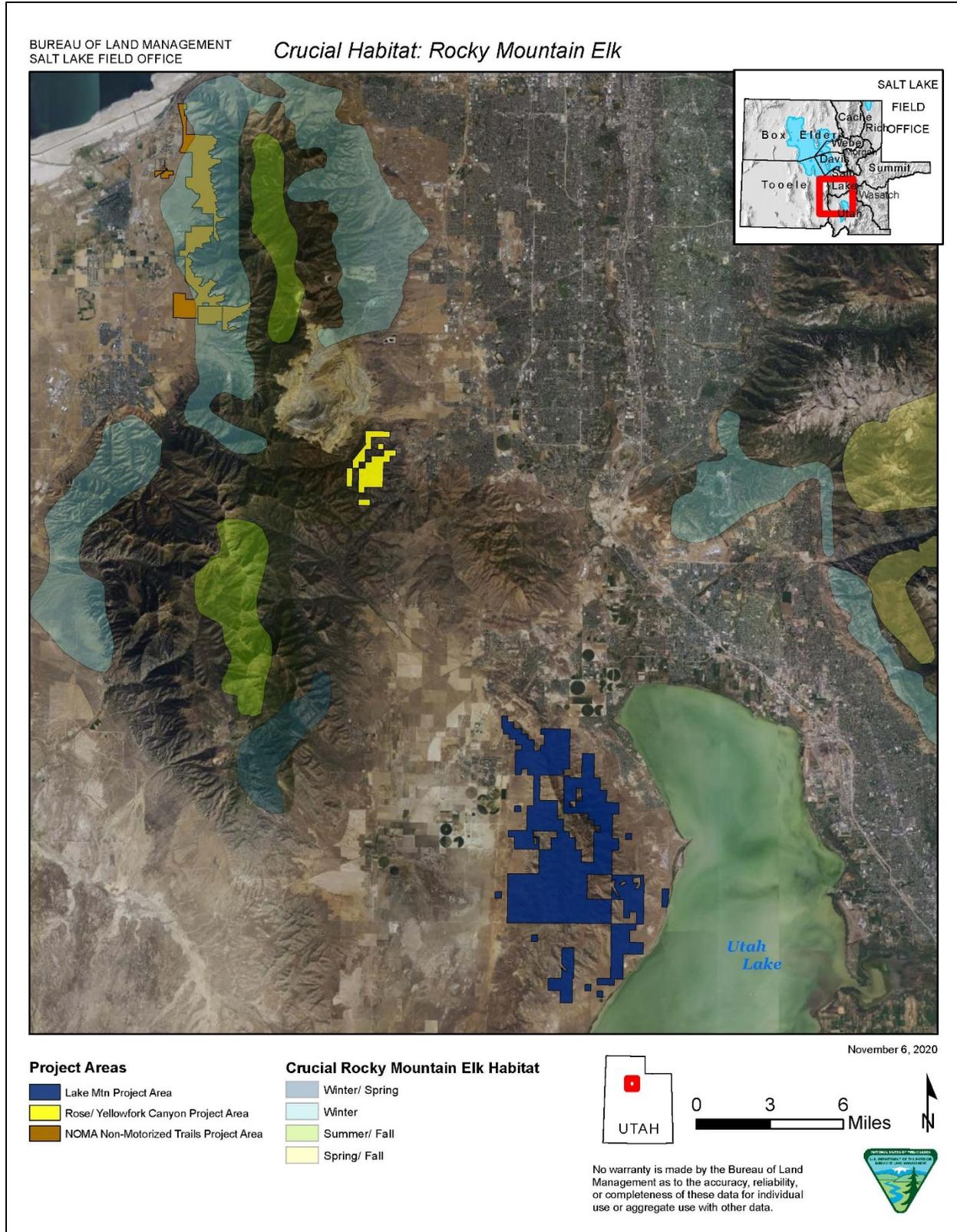


Figure 5. Crucial Rocky Mountain Elk Habitat.

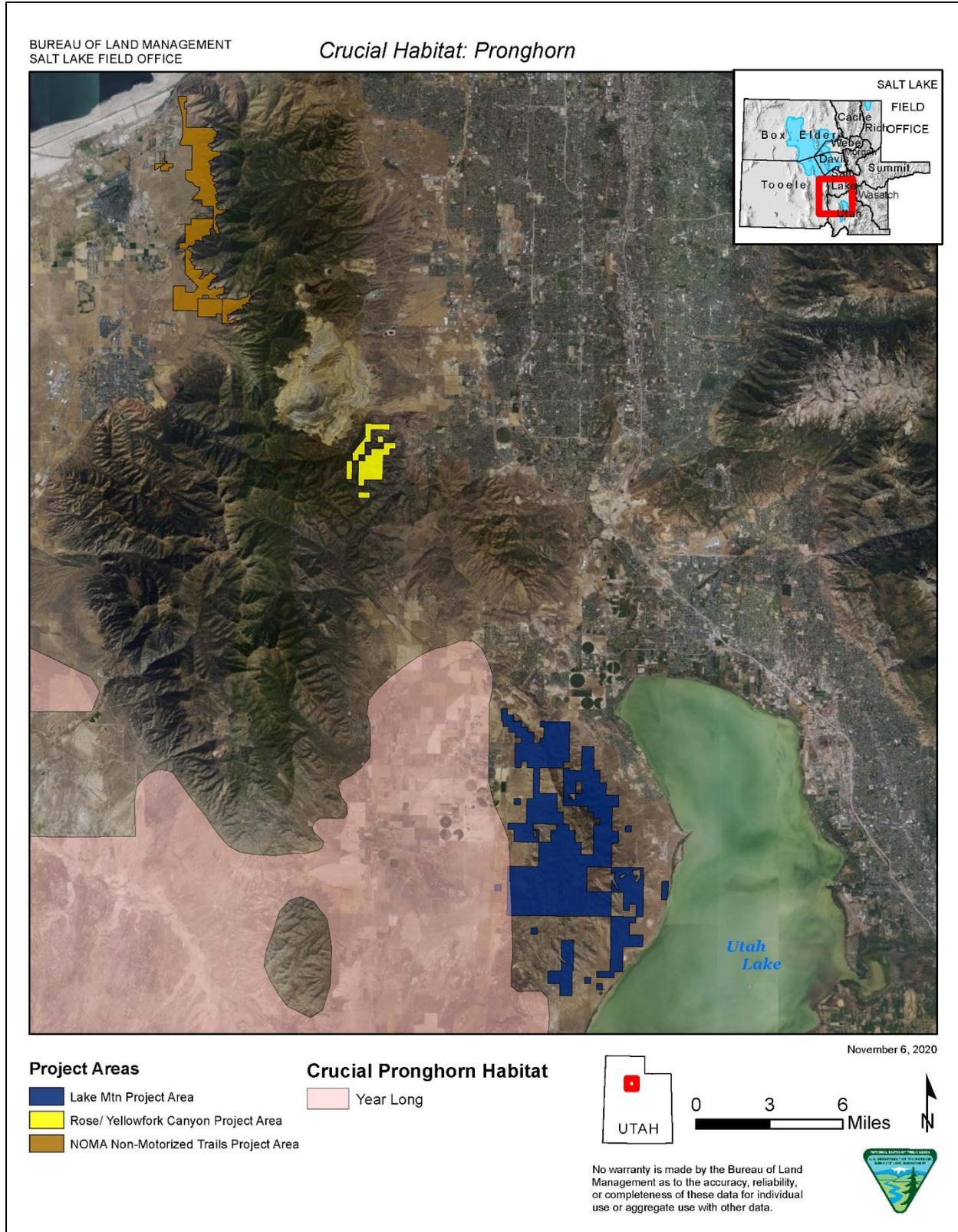


Figure 6. Crucial Pronghorn Habitat.

Appendix B. Interdisciplinary Team Checklist

Determination*	Resource	Rationale for Determination	Assigned																				
Resources and Issues Considered (Includes Supplemental Authorities Appendix 1 H-1790-1)																							
NI	Air Quality & Greenhouse Gas Emissions	<p>Portions of the AA occur within O₃, SO₂, PM_{2.5} and PM₁₀ nonattainment areas (UDAQ 2020).</p> <table border="1" data-bbox="509 432 1024 501"> <thead> <tr> <th></th> <th>O₃</th> <th>SO₂</th> <th>PM₁₀</th> <th>PM_{2.5}</th> </tr> </thead> <tbody> <tr> <td>NOMA</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>R&YF</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>LM</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table> <p>UDAQ concluded that the PM_{2.5} areas attained the federal 24-hour standard and collected sufficient data on the PM₁₀ areas to demonstrate that the 24-hour standard has been met to change this designation to maintenance. EPA’s review and action is pending (UDAQ 2020). In accordance with WO IM 2013-025, components of the proposal are exempted [40 CFR §93.153(c)] from the preparation of a general conformity analysis determination.</p> <p>Opacity would be minimal and localized/limited to occur only during surface disturbing construction/maintenance activities. If these activities are creating dust that limits vehicular travel, including visibility along paved roads or highway, dust abatement and/or other protective measures would be taken to protect the public and keep the construction and/or maintenance personnel safe. Trail use by recreators visiting the areas would not create visibility concerns. Group events would be still be reviewed and processed under future SRPs or other authorizations.</p> <p>Some Criteria Air Pollutants, including greenhouse gases, [On-Road and Off-Road Mobile sources as shown in Utah BLM’s Air Resource Management Strategy 2018 Air Monitoring Report (Appendix H in BLM 2018)] could be emitted/created by vehicles/equipment used to construct/maintain trails that causes surface disturbance and vehicles that are used by official personnel monitoring recreational activities within the AA but they would be miniscule and considered part of background emissions. Construction/maintenance activities would be short duration and intermittent. Hand tools (rakes, shovels etc.) and mechanical equipment (trailcats etc.) could be used.</p> <p>Greenhouse Gases are composed mostly of CO₂, CH₄, N₂O, HFCs, PFCs, & SF₆. Primary sources of GHG emissions include fossil fuel combustion, fugitive CH₄, and combustion of produced oil and gas. GHG emissions could occur from construction and maintenance equipment. It is anticipated that greenhouse gas emissions associated with this project would be negligible.</p> <p>Protective measures would be applied.</p>		O ₃	SO ₂	PM ₁₀	PM _{2.5}	NOMA	✓	✓	✓	✓	R&YF	✓	✓	✓	✓	LM	✓	✓	✓	✓	Pamela Schuller 9/9/20
	O ₃	SO ₂	PM ₁₀	PM _{2.5}																			
NOMA	✓	✓	✓	✓																			
R&YF	✓	✓	✓	✓																			
LM	✓	✓	✓	✓																			
NI	Areas of Critical Environmental Concern	The AA does not intersect ACECs.	Pamela Schuller 6/9/20																				
NI	Cultural Resources	<p>Strict prohibitions on disturbing and/or collecting cultural resources, artifacts, and any historic properties during the proposed activities would be applied. Any known historic properties would be avoided.</p> <p>Class I literature search, Class III intensive pedestrian inventory, and SHPO consultation will occur as individual trail corridors are identified and developed. Additional information is contained in Sections 4.1 and 4.3. Consultation/coordination with SHPO and the Native American Tribes is ongoing. Protective measures would be applied.</p>	Michael Sheehan 5/11/20																				

Determination*	Resource	Rationale for Determination	Assigned
NI	Farmlands (Prime / Unique)	Soil map units that may qualify as prime or unique farmlands could intersect the AA. None of these would be irrigated due to project's activities. These soils would not be utilized in agricultural practices while retained in BLM ownership.	Dylan Tucker 5/20/20
NI	Fuels/Fire Management	The project's activities would not conflict with the Fire Management Plan goals and objectives. The implementation of appropriate reclamation standards would prevent an increase of hazardous fuels. Fuels and fire management would not be impacted. Fuels projects planned within the AA would still be able to be implemented. Protective measures would be applied.	Brad Jessop 6/23/20
NI	Geology / Mineral Resources / Energy Production	Existing mining or energy operations located within or adjacent to the AA would not be changed or affected. Access/use of existing operations would not be limited.	Kevin Kelly 5/26/20
NP	Greater Sage-Grouse Habitat	The AA does not intersect greater sage-grouse habitat.	Nancy Williams 5/28/20
NI	Invasive Species / Noxious Weeds (EO 13112)	Noxious/invasive weeds may be present in the AA. Surface disturbing activities could create opportunity for weed establishment/spread. Treatment would occur as part of regular operations. Constraints, including the use of certified weed free seed and vehicle/equipment wash stations, would be applied as necessary. Control measures would be implemented during any ground disturbing activity and documented through a PUP/PAR. Additional control and procedural information is documented in the Programmatic EIS Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States and its Record of Decision (September 2007). Protective measures would be applied.	Mark Williams 6/20/20
PI	Lands / Access and Property Boundary Evaluation	Trail development would generally be facilitated through the issuance of a right-of-way. Existing land use authorizations located within or adjacent to the AA would not be changed or affected. Access/use of existing operations would not be limited. In accordance with WO IM 2011-122, cadastral survey reviews and verification of the legal land descriptions may be warranted. An LSSR would be prepared when a centerline is established and/or prior to issuance of a ROW for construction of trails within ¼ mile of a land tenure boundary. Protective measures would be applied.	Emily Boivin 5/26/20
NI	Livestock Grazing	Portions of the AA occurs within livestock grazing allotments that have current active grazing. Allotment boundaries and rangeland developments would not be adjusted. The terms and conditions of the current grazing permits or authorized developments would remain the same. An adjustment to current AUMs would not be warranted. However, there are potential livestock human interactions, with the potential of livestock to be harassed by humans on foot or bike and humans to be chased by livestock and livestock herding dogs. Protective measures would be applied.	Dylan Tucker 5/20/20

Determination*	Resource	Rationale for Determination	Assigned
PI	Migratory Birds	Migratory bird species are present throughout the AA, including 7,577 acres of Bird Habitat Conservation Areas. Project activities occurring during migratory bird nesting season (January 1-August 1, UT IM 2017-07) would require mitigation/protective measures. Protective measures would be applied.	Nancy Williams 5/28/20
NI	National Historic Trails	The California National Historic Trail is adjacent to the northern and western boundaries of the North Oquirrh Management Area. However, the California NHT does not intersect BLM-managed lands within the AA. Nonmotorized trail development in the NOMA could provide interpretive opportunities for the California NHT in the form of signage along trails. There are no NHTs within the AAs for Rose and Yellow Fork Canyon or the Lake Mountains. Public access/use and enjoyment of the California NHT would not be limited.	Roxanne Tea 6/22/20
NI	Native American Religious Concerns	The following Tribes were invited to consult via certified letter on June 11, 2020: Hopi, Pueblo of Jemez, Confederated Tribes of the Goshute Reservation, Skull Valley Band of the Goshute Tribe, and Ute Indian Tribe. A response from the Hopi was received requesting continuing consultation should a proposed trail alignment adversely affect prehistoric resources. Consultation/coordination with SHPO and the Native American Tribes is ongoing.	Michael Sheehan 10/22/20
NI	Paleontology	There are no known important paleontological resources within the AA. Utilizing the BLM's Potential Fossil Yield Classification (PFYC), the AA is located on Paleozoic marine sediments considered Class 3, moderate. Known fossils present in nearby Class 3 terrain are common invertebrate fossils. If paleontological resources are discovered during project activities, the holder and their agents would need to protect the site and immediately contact the authorized officer. Specimens should not be removed. Protective measures would be applied.	Kevin Kelley 5/26/20
PI	Recreation	<p>This project would expand developed opportunities for recreation within the AA. All three areas are ERMAs, an area that was designated under the Pony Express Record of Decision, as amended, to generally allow for dispersed recreation, but where the BLM has identified other management objectives outside of recreational use. Public access to and use of existing SRPs/destination areas would not be limited; the project could expand opportunities for SRPs for competitive events such as mountain biking races or horseback riding tours.</p> <p>The project complies with WO IM 2018-062 (Addressing Hunting, Fishing, Shooting Sports, and Big Game Habitats, and Incorporating Fish and Wildlife Conservation Plans and Information from Tribes, State Fish and Wildlife Agencies, and Other Federal Agencies in BLM NEPA Processes). As governed by State of Utah property access laws, the proposed action would not limit hunting, shooting, etc. or associated activities in or in proximity to the AA.</p> <p>The NOMA and portions of the Lake Mountains contain areas that are closed to target shooting; these existing closures would remain in effect. Protective measures would be applied.</p>	Roxanne Tea 6/22/20
NI	Socioeconomics &	Any person, regardless of race or income, can use/access the public lands, including those acreages within the AA. Visiting individuals may be from low-income and/or minority populations.	Pamela Schuller 6/9/20

Determination*	Resource	Rationale for Determination	Assigned																																																																																																									
	Environmental Justice	<p>Refer to the Economic Profile System (EPS) Reports (EPS 2020; demographic and socioeconomic information) and Populations at Risk (PAR) Report (PAR 2020; poverty and vulnerable people information) covering Utah, Tooele, and Salt Lake counties as follows:</p> <table border="1" data-bbox="511 394 1049 793"> <thead> <tr> <th>EPS 2020</th> <th>Combined Area</th> <th>Utah</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align:center">Demographics</td> </tr> <tr> <td>Population</td> <td>1,776,430</td> <td>3,045,350</td> </tr> <tr> <td colspan="3" style="text-align:center">Race</td> </tr> <tr> <td>White Alone</td> <td>83.8%</td> <td>86.4%</td> </tr> <tr> <td>Black or African American Alone</td> <td>1.4%</td> <td>1.2%</td> </tr> <tr> <td>American Indian Alone</td> <td>0.7%</td> <td>1.1%</td> </tr> <tr> <td>Asian Alone</td> <td>3.1%</td> <td>2.3%</td> </tr> <tr> <td>Native Hawaii & Other Pacific Is. Alone</td> <td>1.2%</td> <td>0.9%</td> </tr> <tr> <td>Some Other Race Alone</td> <td>6.7%</td> <td>5.2%</td> </tr> <tr> <td>Two or More Races</td> <td>3.1%</td> <td>3.0%</td> </tr> <tr> <td colspan="3" style="text-align:center">Tribal</td> </tr> <tr> <td>Total Native American</td> <td>0.7%</td> <td>1.1%</td> </tr> <tr> <td>American Indian Tribes</td> <td>0.6%</td> <td>0.9%</td> </tr> <tr> <td>Non-Specified Tribes</td> <td>0.1%</td> <td>0.1%</td> </tr> <tr> <td colspan="3" style="text-align:center">Income</td> </tr> <tr> <td>Per Capita Income</td> <td>\$27,084</td> <td>\$28,239</td> </tr> <tr> <td>Median Household Income</td> <td>\$70,886</td> <td>\$68,374</td> </tr> <tr> <td colspan="3" style="text-align:center">Poverty</td> </tr> <tr> <td>People Below Poverty</td> <td>10.1%</td> <td>10.3%</td> </tr> <tr> <td>Families Below Poverty</td> <td>6.9%</td> <td>7.3%</td> </tr> <tr> <td colspan="3" style="text-align:center">Poverty by Race and Ethnicity</td> </tr> <tr> <td>White Alone</td> <td>71.5%</td> <td>76.2%</td> </tr> <tr> <td>All Other Races</td> <td>28.5%</td> <td>23.8%</td> </tr> </tbody> </table> <p>Additional socioeconomic information is contained in the Utah, Tooele, and Salt Lake county general plans and their corresponding resource management plans (Section 1.4). BLM’s land uses in the AA would continue and planning allocations would not be altered.</p> <p>Minority and low-income environmental justice (EJ) populations may use or live in proximity to the AA (local cities, towns, and isolated ranches in Utah, Tooele, and Salt Lake counties). However, these EJ population indicators do not total 50% or above, nor are they 10 points higher than the Utah reference population.</p> <table border="1" data-bbox="511 1081 1049 1270"> <thead> <tr> <th>PAR 2020</th> <th>Combined Neighborhoods (Census Tracts)</th> <th>Utah</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align:center">Poverty</td> </tr> <tr> <td>People in Poverty</td> <td>4.3%</td> <td>10.3%</td> </tr> <tr> <td>People in “Deep-Poverty”</td> <td>2.1%</td> <td>4.6%</td> </tr> <tr> <td>Both in Poverty and Over 65</td> <td>0.1%</td> <td>0.7%</td> </tr> <tr> <td colspan="3" style="text-align:center">Race</td> </tr> <tr> <td>White Alone</td> <td>89.8%</td> <td>86.4%</td> </tr> <tr> <td>All Other Races</td> <td>10.2%</td> <td>13.6%</td> </tr> <tr> <td colspan="3" style="text-align:center">Vulnerable People</td> </tr> <tr> <td>People w/ Disabilities</td> <td>5.7%</td> <td>9.6%</td> </tr> <tr> <td>People w/o Health Insurance</td> <td>5.9%</td> <td>10.0%</td> </tr> </tbody> </table> <p>The proposal’s design features/protective measures do not place an undue burden on these groups, and it would not cause any disproportionately high and adverse effects on minority or low-income populations.</p>	EPS 2020	Combined Area	Utah	Demographics			Population	1,776,430	3,045,350	Race			White Alone	83.8%	86.4%	Black or African American Alone	1.4%	1.2%	American Indian Alone	0.7%	1.1%	Asian Alone	3.1%	2.3%	Native Hawaii & Other Pacific Is. Alone	1.2%	0.9%	Some Other Race Alone	6.7%	5.2%	Two or More Races	3.1%	3.0%	Tribal			Total Native American	0.7%	1.1%	American Indian Tribes	0.6%	0.9%	Non-Specified Tribes	0.1%	0.1%	Income			Per Capita Income	\$27,084	\$28,239	Median Household Income	\$70,886	\$68,374	Poverty			People Below Poverty	10.1%	10.3%	Families Below Poverty	6.9%	7.3%	Poverty by Race and Ethnicity			White Alone	71.5%	76.2%	All Other Races	28.5%	23.8%	PAR 2020	Combined Neighborhoods (Census Tracts)	Utah	Poverty			People in Poverty	4.3%	10.3%	People in “Deep-Poverty”	2.1%	4.6%	Both in Poverty and Over 65	0.1%	0.7%	Race			White Alone	89.8%	86.4%	All Other Races	10.2%	13.6%	Vulnerable People			People w/ Disabilities	5.7%	9.6%	People w/o Health Insurance	5.9%	10.0%	
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NI	Threatened, Endangered, Candidate or Special Status Plant Species	Potential habitat for Ute ladies’ tresses occurs at one spring site near Coyote Canyon in the NOMA. This site is not suitable for trails and would be avoided. No other listed species or their designated critical habitat are present. Per BLM Manual 6840 a special status species is: “collectively, federally listed or proposed and Bureau sensitive species, which include both Federal candidate species and delisted species within 5 years of delisting.” No known populations of special status plants occur within the recreational area.	Mark Williams 6/22/20																																																																																																									
PI	Threatened, Endangered, Candidate or Special Status Animal Species (Aquatic and Terrestrial)	Listed species or their designated critical habitat are not present. All aquatic and terrestrial animal species currently listed as threatened, endangered, and candidate species by the USFWS, downloaded on 5/28/20 (http://ecos.fws.gov/ipac) and formally requested through IPAC, were reviewed. Aquatic sensitive species are not known to occur in the AA. Terrestrial BLM sensitive species occur in the AA. Protective measures would be applied.	Nancy Williams 5/28/20 Cassie Mellon 5/29/20																																																																																																									

Determination*	Resource	Rationale for Determination	Assigned
NI	Travel / Transportation	<p>A portion of the NOMA is limited to designated routes, with seasonal closures for Big Game Winter Range on the low elevation levels. Approximately 12,445 acres of the NOMA is closed to OHV use (BLM 1997). BLM-managed lands in the Rose and Yellow Fork Canyon and the Lake Mountains are designated as limited to existing routes for OHVs (BLM 1992). This project would not affect motorized access or travel management designations as it does not include any changes to the OHV designations.</p> <p>Protective measures would be applied.</p>	Roxanne Tea 6/22/20
PI	Vegetation (Excluding Special Status Species)	<p>Rangeland health standards would be achieved/maintained by the application of the protective measures/stipulations.</p> <p>Surface disturbing activities associated with the proposed action/alternatives could temporarily impact vegetation resources within the AA.</p> <p>Protective measures would be applied.</p>	Mark Williams 6/22/20
NI	Soil	Trail design, layout and protective measures would be sufficient to maintain soil integrity/function; therefore, soils are not impacted.	Dylan Tucker 5/20/20
PI	Visual Resources	<p>The AA occurs within VRM Class II (approximately 75 acres in Rose/Yellow Fork Canyons and all lands above 5,200 ft elevation within the NOMA), Class III (lands below 5,200 ft elevation in the NOMA), and VRM Class IV (Lake Mountains and majority of Rose and Yellow Fork Canyons). A visual contrast rating will be prepared for VRM Class II areas.</p> <p>Protective measures would be applied.</p>	Roxanne Tea 6/22/20
NI	Wastes (hazardous or solid)	<p>Hazardous wastes would not be created by the project activities. Solid or liquid materials brought on site to support operations would be stored in original containers, used as per manufacturer's directions, and removed from the site as soon as is practicable or at the conclusion of the project's activities. Wastes would not be disposed of on site. Should solid or hazardous materials be released during the project's activities, they will be remediated immediately. Should solid or hazardous wastes be discovered in quantities in excess of reportable quantities (RQs), as a result of the project's activities, they will be reported to BLM and the State.</p> <p>Protective measures would be applied.</p>	Alan Jones 6/18/20
NI	Water Resources / Quality (drinking/ surface / ground)	<p>Surface water is limited in the AA. Ground water resources would not be impacted by this project. Erosion from trails crossing intermittent or perennial streams is possible.</p> <p>Protective measures would be applied.</p>	Cassie Mellon 5/29/20
PI	Wetlands / Riparian Zones & Floodplains	<p>Riparian areas may be intersected by this project. Refer to Vegetation section.</p> <p>Protective measures would be applied.</p>	Cassie Mellon 5/29/20
NP	Wild and Scenic Rivers	The AA does not intersect any designated, eligible or suitable wild and scenic rivers.	Roxanne Tea 6/22/20

Determination*	Resource	Rationale for Determination	Assigned
NP	Wilderness / WSA	The AA does not intersect designated wilderness or wilderness study areas.	Roxanne Tea 6/22/20
NI	Lands with Wilderness Characteristics	The Lake Mountains and Rose and Yellow Fork Canyon areas do not include any BLM-identified lands with wilderness characteristics, nor any areas nominated by citizens or proposed in America's Red Rock Wilderness Act. A portion of the AA within the NOMA intersects BLM-identified lands with wilderness characteristics and an America's Red Rock Wilderness citizen proposed unit. Protective measures would be applied.	Roxanne Tea 6/22/20
NP	Wild Horses and Burros	The AA does not intersect Cedar Mountain/Onaqui Mountain HMA.	Tami Howell 5/18/20
PI	Wildlife (Aquatic and Terrestrial) Excluding Special Status Species	The AA contains terrestrial and aquatic habitats for big game, small game and non-game species. The project complies with WO IM 2018-062 (Addressing Hunting, Fishing, Shooting Sports, and Big Game Habitats, and Incorporating Fish and Wildlife Conservation Plans and Information from Tribes, State Fish and Wildlife Agencies, and Other Federal Agencies in BLM NEPA Processes). As governed by State of Utah property access laws, the proposed action would not limit hunting, shooting, etc. or associated activities in or in proximity to the AA. Impacts to big game are analyzed. Protective measures would be applied	Nancy Williams 5/28/20 Cassie Mellon 5/29/20
NI	Woodland / Forestry	Access to/use of woodland product sale areas within and/or adjacent to the AA would not be limited.	Mark Williams 6/22/20
* NP = not present in the area impacted by the proposed or alternative actions; NI = present, but not affected to a degree that detailed analysis is required; and PI = present with potential for relevant impact that need to be analyzed in detail			

Appendix C. Protective Measures

Air Quality

Water or other means satisfactory to the authorized officer will be used for dust control during construction/maintenance activities.

Construction/maintenance activities that contribute to regional emissions during periods of extreme poor air quality will be limited. Construction, operation, or maintenance activities shall meet federal, state, and local emission standards for air quality.

Cultural/Paleontological Resources

The discovery of any cultural and/or paleontological resource (historic or prehistoric site, feature, or object(s)) by the Proponent, its agents, assignees, contractors, or monitors shall be immediately reported to the BLM authorized officer. The Proponent shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the BLM authorized officer. An evaluation of the discovery shall be made by BLM archaeologists, under the direction of the BLM authorized officer, to determine the appropriate actions to prevent the loss or damage to cultural or scientific values. The Proponent shall be responsible for the costs of evaluating discovered sites or objects and preventing the loss or damage to cultural or scientific values.

Fire and Fuels Management

The holder or its contractors will notify the BLM of any fires and comply with all rules and regulations administered by the BLM concerning the use, prevention and suppression of fires on federal lands, including any fire prevention orders that may be in effect at the time of the permitted activity. The holder or its contractors may be held liable for the cost of fire suppression, stabilization and rehabilitation. In the event of a fire, personal safety will be the first priority of the holder or its contractors. The holder or its contractors will:

- a. Operate all internal and external combustion engines on federally managed lands per 36 CFR §261.52, which requires all such engines to be equipped with a qualified spark arrester that is maintained and not modified.
- b. Carry shovels, water, and fire extinguishers that are rated at a minimum as ABC - 10 pound on all equipment and vehicles. If a fire spreads beyond the suppression capability of workers with these tools, all will cease fire suppression action and leave the area immediately via pre-identified escape routes.
- c. Initiate fire suppression actions in the work area to prevent fire spread to or on federally administered lands.
- d. Notify the Northern Utah Interagency Fire Center (801) 908-1901 (or 911) immediately of the location and status of any fire.

Lands and Realty

Any ROW authorized is subject to all prior valid and existing rights on the effective date of this grant, and the United States makes no representations or warranties whatever, either expressed or implied, as to the existence, or nature of such valid existing rights.

The holder shall protect all survey monuments found within the ROW. Survey monuments include, but are not limited to, General Land Office (GLO) and Bureau of Land Management (BLM) Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable public and private civil survey monuments. In the event of the obliteration or disturbance of any survey monument, the holder shall immediately report the incident in writing to the AO and the respective installing authority. Where GLO or BLM right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a BLM cadastral surveyor to restore the disturbed monuments or references using the surveying procedures found within the latest edition of the Manual of Surveying Instructions for the Survey of the Public Lands in the United States. The holder shall record the resulting survey at the appropriate county facility and send a copy to the AO. If any BLM cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for all survey costs.

Future right-of-way (ROW) applicants will be notified that target shooting is allowed in some of the Planning Area and that any above ground facility may be impacted by stray bullets, possible wildfire, and exploration by individuals visiting or recreating in the area.

Livestock Grazing

Trails will be placed a quarter mile (1,320 ft) away from and avoid livestock fences, water troughs/ponds and corrals.

Gates or other acceptable passthroughs will be installed in locations where the trail intersects each fence line.

Information will be posted or shared with the general recreating public and permitted/authorized recreation events, notifying them that the trail system occurs within active livestock grazing allotments. Recreation users will encounter authorized livestock (including their waste), infrastructure and herd dogs/llamas or other livestock protection animal utilized by grazing permittees. Under CFR §4140.1 (b), parts 2, 4, 5, 7, 11), harassing livestock or vandalizing range developments is not permitted.

Migratory Birds

Construction/installation activities will occur outside of the migratory bird breeding season (raptors: January 1 to August 31, passerine birds and long-billed curlew: April 1 to July 31) when feasible.

If construction/installation activities must occur during the breeding season, migratory bird surveys will be conducted by a qualified wildlife biologist no more than 7-10 days prior to project initiation. If implementation activities are provided by a contractor, a report of the survey results will be provided to the BLM.

- If no migratory birds are found nesting in the AA, then project activities may proceed as planned.
- If migratory birds are present and nesting in the AA, the following measures must be incorporated during the project implementation phase:
 - Active passerine bird nests shall be flagged and avoided by 100 feet until the nests are no longer active.

- Active curlew nests shall be flagged and avoided by 200 meters (660 feet) until the nests are no longer active.
- Active raptor nests shall be avoided by the spatial and temporal buffers specified in the U.S. Fish and Wildlife Utah Field Office's Guidelines for Raptor Protection From Human and Land Use Disturbances (Romin, et al., 2002).

New roads, parking areas or trailheads will not be located within one km (1,100 yards) of a pinyon-jay nesting colony site. Surveys will be performed in suitable habitat during the breeding season (March 1 – May 1) prior to installation of new facilities.

Organized recreational activities will be restricted within 0.5 mile of cottonwood trees providing bald eagle winter roosts during the period November 15 through March 15.

Recreation and Travel/Transportation

Special Recreation Permits (SRP) would be required for commercial, competitive, or organized uses on public lands in the AA, unless exempted by the Authorized Officer. Any use of private lands for a planned event would require a separate, written agreement with the private landowner.

Access for vehicles related to construction and maintenance activities must conform to travel management designations (e.g., limited to existing or designated routes; no cross-country motorized use).

Riparian/Floodplains/Water

No new surface disturbing activities will be allowed within 1,200 feet (366 meters) of riparian areas or the lakeshore of Utah Lake unless it can be shown that:

- there are not practical alternatives or,
- all long-term impacts can be fully mitigated or,
- the activity will benefit and enhance the riparian area.

Stream crossings will be designed and located where the channel is narrow, straight, and uniform and has stable soils and relatively flat terrain.

- Crossings will be selected where erosion potential is low, with a gentle slope approach where channels are not deeply incised, and crossings will be oriented perpendicular to the channel.
- Low water crossings will be designed to maintain the function and bedload movement of the natural stream channel. Low wash crossings, bridges, or similar devices will be installed at 100-year flood plain crossings or as needed.

Special Status Wildlife Species

New developments/facilities will not be located within 100 meters (330 feet) of active pygmy rabbit or kit fox burrows. Surveys will be performed in suitable habitat no more than 30 days prior to installation of new facilities.

Vegetation

New developments will be focused in already disturbed areas, where feasible.

New disturbances, from facility development/installation will be actively reclaimed. Reclamation/rehabilitation measures will include reseeding, recontouring, water barring, etc. Seed mixes will prioritize native species or follow the emergency stabilization seed mix developed for fire reclamation purposes.

Invasive species will be treated per BLM policy.

Visual Resources

A Visual Contrast Rating (VCR) (BLM 1986) will be conducted for proposed centerline alignments in VRM Class II areas, incorporating information from the most recent visual resources inventory (BLM 2011) at appropriate key observation points. The placement of trails will avoid breaking the visual horizon wherever possible. Trails will flow with natural topography to the greatest extent practicable, and be designed to minimize contrast to the form, line, color and texture of the existing landscape.

Trails will be constructed/maintained in a manner that is consistent with the VRM Class objectives.

Trail development will consider visibility from current adjacent residential development, and proposed centerline alignments will incorporate existing vegetation or topographical screening wherever possible to respect the privacy of nearby residences.

The placement of trails will avoid breaking the visual horizon wherever possible. Trails will flow with natural topography to the greatest extent practicable, and be designed to minimize contrast to the form, line, color and texture of the existing landscape. Implementation of these protective measures would mitigate impacts to visual resources.

Lands with Wilderness Characteristics

Trailheads and parking areas must be constructed outside of any BLM-identified lands with wilderness characteristics.

Wildlife (excluding Special Status Species)

New project construction/installation will not occur during the winter and migration periods for mule deer and elk (December 1 to April 15) in crucial winter habitat for mule deer or elk, crucial yearlong habitat for mule deer, or in mule deer high-use migration corridors

No organized recreational events will be authorized on recreational trails during the winter and migration periods for mule deer and elk (December 1 to April 15) in crucial winter habitat for mule deer or elk, crucial yearlong habitat for mule deer, or in mule deer high-use migration corridors.

Trails above 4,440' elevation in the NOMA will closed during the winter period for mule deer and elk (November 15 to April 15).

Informational kiosks in the NOMA and the Lake Mountains will include information regarding the importance of those areas for big game habitat and migration corridors.

In developed recreation sites, visitors will be required to keep their dogs on a leash secured to a fixed object, or under the control of a person, as required under BLM regulations 43 CFR §8365.

Wastes (hazardous or solid)

Solid or liquid materials brought on site to support operations will be stored in original containers, used as per manufacturer's directions, and removed from the site as soon as is practicable or at the conclusion of the project's activities.

Wastes will not be disposed of on site. Should solid or hazardous materials be released during the project's activities, they will be remediated immediately.

If solid or hazardous wastes be discovered in quantities in excess of reportable quantities (RQs), as a result of the project's activities, they will be reported to BLM and the State.