U.S. DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Dingell Act — Emery County Land Exchange

DOI-BLM-UT-0000-2022-0003-EA



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United States Department of the Interior
Bureau of Land Management

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Environmental Assessment
DOI-BLM-UT-0000-2022-0003-EA

Public Law 116-9, Section 1255
John D. Dingell, Jr. Conservation, Management and Recreation Act Land Exchange
Case File No. UTU-95500FD/PT

Location: Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne Counties, Utah

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Abbreviations

µg/m^3	micrograms per cubic meter
2015 Approved Resource Management Plan Amendment	*Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, Including the Greater Sage-Grouse Sub-Regions of Idaho and Southwestern Montana, Nevada and Northeastern California, Oregon, Utah*
2016 GHG Guidance	Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews
ACEC	area of critical environmental concern
AEO	U.S. Energy Information Administration's Annual Energy Outlook Report
AMR	Air Resource Management Strategy 2022 Monitoring Report
ATI	agreement to initiate
AUM	animal unit month
BLM	Bureau of Land Management
BLM-OGD	oil and gas development activities under Bureau of Land Management jurisdiction in Uintah and Duchesne Counties
BMP	best management practice
CAA	Clean Air Act
CCFO	Cedar City Field Office
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act

Dingell Act	John D. Dingell, Jr. Conservation, Management, and Recreation Act of 2019
DOGM	Utah Division of Oil, Gas and Mining
E	East (in legal land descriptions)
EA	environmental assessment
ECCR	Emery County Coal Resources, Inc.
EIA	U.S. Energy Information Administration
EJ	environmental justice
EO	Executive Order
EPA	U.S. Environmental Protection Agency
equalization parcels	Additional non-federal lands located within wilderness areas or National Conservation Areas in Washington County, Utah, that could be included in the land exchange if needed to equalize values
ERMA	extensive recreation management area
ESA	Endangered Species Act
F/M	foreground/middleground
FEMA	Federal Emergency Management Agency
FFO	Fillmore Field Office
FLPMA	Federal Land Policy and Management Act of 1976
FO	field office
GHG	greenhouse gas
GHMA	General Habitat Management Area
GIS	geographic information system
GR	Grass
GRSG	greater sage-grouse
GS	Grass-shrub
HAP	hazardous air pollutant
HMA	herd management area

HSG	hydrologic soil group
HUC	hydrologic unit code
I	ice
IPaC	Information for Planning and Consultation
IM	Instruction Memorandum
IWG	Interagency Working Group on the Social Cost of Greenhouse Gases
KFO	Kanab Field Office
land exchange	Dingell Act – Emery County Land Exchange
LWC	lands with wilderness characteristics
M&I	municipal and industrial
MFO	Moab Field Office
MFP	management framework plan
MLRA	Major Land Resource Area
MOU	memorandum of understanding
MP	milepost
Mt	million metric tons (megatonnes)
MW	megawatt
N	North (in legal land descriptions)
NAAQS	National Ambient Air Quality Standards
NAH	North American Helium
NB	Non-burnable
NCA	National Conservation Area
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NHT	National Historic Trail
NHTSA	National Highway Traffic Safety Administration

N_2O	nitrous oxide
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOEP	notice of exchange proposal
NRHP	National Register of Historic Places
NTSA	National Trails System Act of 1968
O_3	ozone
OHV	off-highway vehicle
PFO	Price Field Office
PFYC	Potential Fossil Yield Classification
PHMA	Priority Habitat Management Area
PILT	Payments in Lieu of Taxes
PIN	project identification number
PLO	Public Land Order
$PM_{2.5}$	particulate matter 2.5 microns and smaller
PM_{10}	particulate matter 10 microns and smaller
ppb	parts per billion
ppm	parts per million
PRPA	Paleontological Resources Preservation Act of 2009
PSD	Prevention of Significant Deterioration
R	Range (in legal land descriptions)
RFO	Richfield Field Office
RMP	resource management plan
ROS	rate of spread
ROW	right-of-way
S	South (in legal land descriptions)
SC-GHG	social cost of greenhouse gases

SCOTUS	Supreme Court of the United States
SCT	Savage Coal Terminal
SH	Shrub
SHPO	State Historic Preservation Office
SITLA	Utah School and Institutional Trust Lands Administration
SLFO	Salt Lake Field Office
SLB&M	Salt Lake Base and Meridian (in legal land descriptions)
SO_2	sulfur dioxide
SO_x	sulfur oxides
SGFO	St. George Field Office
SR	Utah State Route
SRMA	special recreation management area
SWAP	state wildlife action plan
T	Township (in legal land descriptions)
TCP	traditional cultural property
TDS	total dissolved solids
TL	Timber litter
TU	Timber-understory
U	geological units of unknown potential
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality
UDEQ	Utah Department of Environmental Quality
UDFFSL	Utah Division of Forestry, Fire and State Lands
UDNR	Utah Department of Natural Resources
UDOT	Utah Department of Transportation
UDSH	Utah Division of State History
UDWR	Utah Division of Wildlife Resources

UDWRi	Utah Division of Water Rights
UDWQ	Utah Division of Water Quality
UGS	Utah Geological Survey
US	U.S. Highway
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOE	U.S. Department of Energy
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWRAP	Utah Department of Natural Resources Wildfire Risk Assessment Portal
VFO	Vernal Field Office
VOC	volatile organic compound
VRI	visual resource inventory
VRM	visual resource management
W	West (in legal land descriptions)
W	water
WEG	wind erodibility group
WOTUS	waters of the United States
WSA	wilderness study area
WSR	wild and scenic river
WUI	wildland-urban interface

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Chapter 1. Purpose and Need

1.1 Introduction

The Bureau of Land Management (BLM) Utah State Office prepared this environmental assessment (EA) to analyze and disclose the environmental consequences of implementing an exchange of federal and non-federal land as directed by the John D. Dingell, Jr. Conservation, Management, and Recreation Act of 2019 (Dingell Act), Public Law 116-9, Section 1255. This land exchange is referred to as the Dingell Act – Emery County Land Exchange (hereafter referred to as the land exchange) and is assigned the case file number UTU-95500FD/PT. An agreement to initiate (ATI) an exchange was prepared in November 2021 (BLM 2021g).

The land exchange would include public and state lands located across up to 18 counties in Utah: Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne Counties. Under the land exchange, the Secretary of the Interior, acting through the BLM, would convey to the State of Utah School and Institutional Trust Lands Administration (SITLA)[1] approximately 89,700[2] acres of federal lands or interests in land (comprising approximately 80,100 acres of surface and mineral estate; approximately 4,200 acres of surface-only estate; and approximately 5,400 acres of mineral-, oil and gas–, and coal-only estate) and 47 water rights (many of which are pre-1903 diligence claims). For the purposes of this EA, federal lands are hereafter referred to as BLM lands or parcels.

In exchange for the above BLM lands, SITLA would convey to the BLM approximately 116,000 acres of non-federal lands or interests therein, including approximately 114,700 acres of surface and mineral estate, approximately 1,100 acres of mineral-only estate, and 60 water rights. The SITLA parcels are located within newly created wilderness areas, the San Rafael Swell Recreation Area, the Green River Wild and Scenic Rivers (WSR) Corridor in Emery County, and the John Wesley Powell National Conservation Area (NCA) in Uintah County. For the purposes of this EA, non-federal lands are hereafter referred to as SITLA lands or parcels. Additional SITLA lands located within wilderness areas or NCAs in Washington County could be included in the land exchange if needed to equalize values (hereafter referred to as equalization parcels).

BLM lands were grouped into 56 parcels, primarily to consolidate contiguous BLM land sections. The SITLA lands were grouped into 219 parcels. Some BLM and SITLA lands have been removed from the exchange by mutual agreement pursuant to Section 1255(b)(2)(B) of the Dingell Act, subsequent to the BLM's 2021 notice of exchange proposal (NOEP) (BLM 2021f). Additional minor adjustments to some BLM or SITLA parcels could occur following formal survey and more detailed title review.

The lands involved, including their legal land descriptions, are described in Appendix A. The parcels are illustrated by an overview map in Figure 1.1, and area-specific location maps are provided in Appendix B. The parcels are further described in Sections 2.1.1 and 2.1.2.

[1] During the preparation of this EA, SITLA shortened its acronym to "TLA." For administrative efficiency, however, the EA continues to use the SITLA acronym to refer to this agency throughout.

[2] This EA generally rounds acreages reported in other relevant documents, including the NOEP and ATI. Additionally, some parcels have been removed over time by mutual agreement between the BLM and SITLA. Therefore, there may be minor acreage differences across documents.

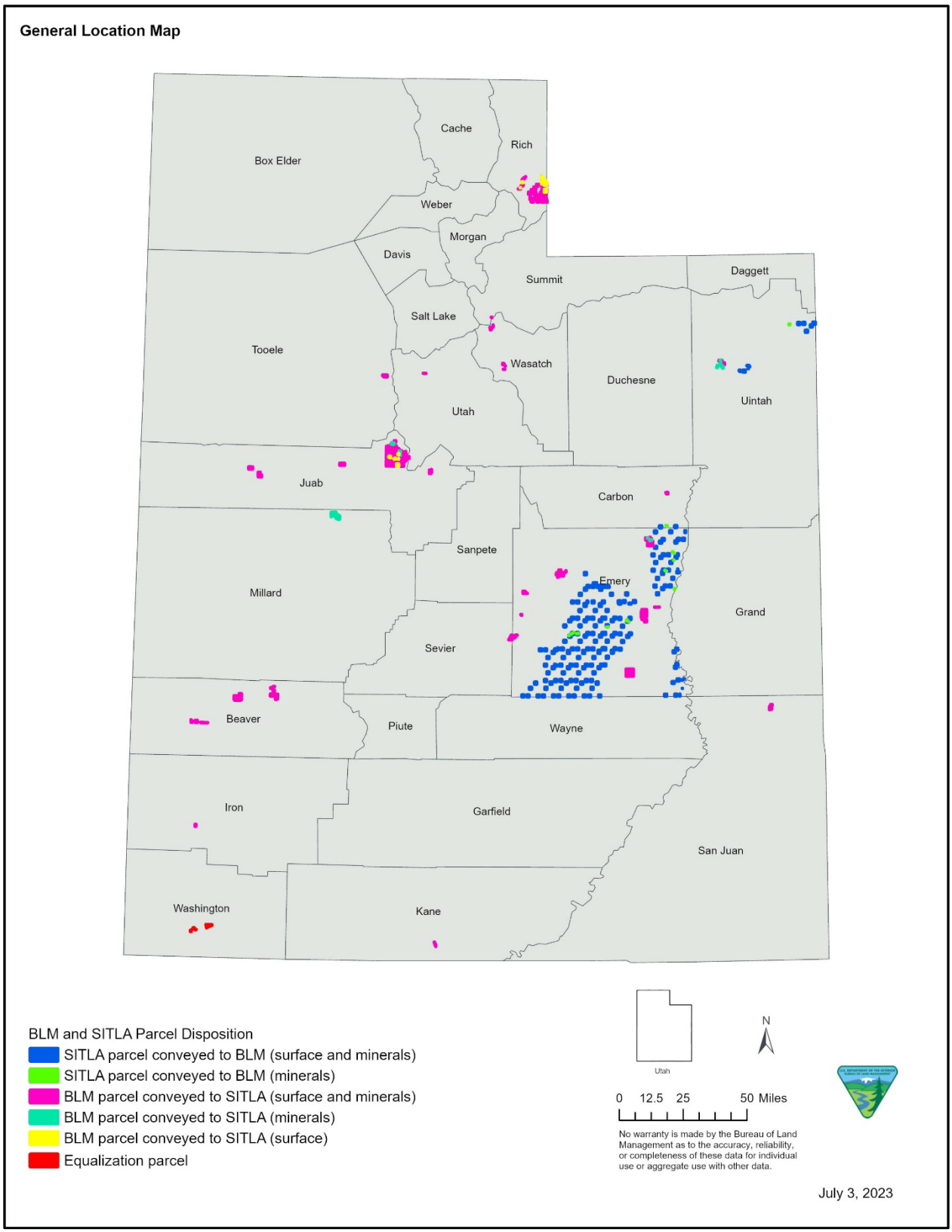


Figure 1.1. General location map for the proposed land exchange.

1.2 Land Exchange History

As part of the initial implementation of the land exchange, the BLM and SITLA mutually agreed to drop six BLM parcels from the exchange in full: parcels 16, 18, 19, 22, 31, and 53S. In addition, the BLM and SITLA mutually agreed to remove portions of BLM parcels 6, 23, 26, 53, and 53OG. Reference to these parcels throughout the EA represents the portions that remain in the land exchange. Later in the process, the BLM and SITLA also mutually agreed to remove the entirety of BLM parcels 7, 14, and 45, as well as a portion of parcel 8. Rationale for these land exchange modifications is as follows:

- SITLA determined that exchange of the following parcels (or portions of parcels) did not meet its management objectives, so it requested that they be modified or removed:
    - Parcel 6 acreage was reduced by 153.42 acres.
    - Parcel 19 was removed.
    - Portions of parcel 23 (within Section 33, Township (T) 18 South, Range (R) 9 East, containing 40 acres) was removed because it contains a gravel pit.
- Parcels 7, 45, and a portion of parcel 8 were removed due to an overlapping Federal Energy Regulatory Commission withdrawal that was placed on the land after the Dingell Act. The Federal Energy Regulatory Commission withdrawal limits the BLM's authority to transfer the land; therefore, the BLM and SITLA mutually agreed to drop these parcels from the exchange.
- Parcel 14 was removed because the BLM determined, using data and information provided by the U.S. Fish and Wildlife Service (USFWS), that it contained designated critical habitat for the Mexican spotted owl (*Strix occidentalis lucida*). Section 1255(b)(3) of the Dingell Act precludes the BLM from exchanging any public lands containing designated critical habitat for a species listed as threatened or endangered under the ESA.
- Parcels 16 and 18 were withdrawn by Public Land Order (PLO) 3783 and are under the jurisdiction of the Bureau of Reclamation for the Jordanelle Dam and Reservoir project. The BLM does not have the authority to exchange the land unless the withdrawal is revoked upon the request of the Bureau of Reclamation. The Bureau of Reclamation does not intend to request revocation of the withdrawal. Therefore, the parcels were eliminated from the land exchange.
- Parcel 22 was withdrawn under the Watershed Protection Special Act of 1921, 41 Stat. 1087. To clear the land title of this encumbrance, the public law establishing the act would need to be repealed. The BLM has no authority to revoke this withdrawal. Therefore, the parcel was eliminated from the land exchange.
- Portions of parcel 26 (all of Section 1, T20 South, R6 East, and portions of Sections 11 and 12, T20 South, R6 East, comprising approximately 734 acres) were removed from the exchange to exclude lands that are under a Recreation and Public Purposes Act lease to the City of Ferron for a golf course and lands that contain threatened and endangered plant species and sensitive cultural resources.
- Parcel 31 was withdrawn for a BLM Special Designation for the Three Rivers Corridor. Portions of parcel 31 were withdrawn for Power Site Reservation No. 119 and Power Site Classification No. 377. This withdrawal must either be revoked before transfer, or the

patent could be issued with a reservation under the provision of Section 24 of the Federal Power Act; however, SITLA requested to drop the parcel from the exchange due to complications with removing the withdrawals.

- Parcel 53S (comprising 40 acres) and portions of parcels 53 and 53OG (comprising 1,209.2 acres) were removed from the exchange upon the request of SITLA due to concerns regarding a potential trespass.

Additionally, SITLA requested that SITLA parcels located within the Range Creek drainage within T15 South, T16 South, and T17 South, R15 East and R16 East be removed from consideration because they were included as a result of a mapping error and were not located within conservation designations established by the Dingell Act (Ure 2019). These parcels were removed prior to the ATI or NOEP and, therefore, do not correspond to any parcel numbers listed in those documents.

1.3 Purpose and Need

In accordance with Section 1255(b) of the Dingell Act, the State of Utah has offered SITLA land in exchange for BLM-administered land.[3] The purpose for the action is to respond to this offer. The need for the action is established in Section 1255(b) of the Dingell Act and Section 206 of the Federal Land Policy and Management Act of 1976, as amended (43 United States Code [USC] 1716) (FLPMA). If the BLM determines that the exchange of the identified parcels is in the public interest (43 Code of Federal Regulations [CFR] 2200.0-6[b]), this section of the law further requires the agency to 1) accept the offer; and 2) on receipt of all right, title, and interest in and to the SITLA land from the State, convey to the State (or a designee) all right, title, and interest of the United States in and to the BLM land.

1.4 Decision to Be Made

As required by Sections 1255(b)(1) and 1255(b)(4)(A), the BLM will determine whether the land exchange is in the public interest and is consistent with the Dingell Act and other applicable law. Using this information, the BLM will decide whether to approve the exchange of the identified BLM and SITLA land. In evaluating whether the exchange of the identified parcels is in the public interest (43 CFR 2200.0-6(b)):

> *"the BLM authorized officer shall give full consideration to the opportunity to achieve better management of Federal lands, to meet the needs of State and local residents and their economies, and to secure important objectives, including but not limited to: Protection of fish and wildlife habitats, cultural resources, watersheds, wilderness and aesthetic values; enhancement of recreation opportunities and public access; consolidation of lands and/or interests in lands, such as mineral and timber interests, for more logical and efficient management and development; consolidation of split estates; expansion of communities; accommodation of land use authorizations; promotion of multiple-use values; and fulfillment of public needs. In making this determination, the authorized officer must find that:*
>
> > *(1) The resource values and the public objectives that the Federal lands or interests to be conveyed may serve if retained in Federal ownership are*

[3] The lands involved in the exchange are described in Section 2.1.

> *not more than the resource values of the non-Federal lands or interests and the public objectives they could serve if acquired, and*
>
> *(2) The intended use of the conveyed Federal lands will not, in the determination of the authorized officer, significantly conflict with established management objectives on adjacent Federal lands and Indian trust lands. Such finding and the supporting rationale shall be made part of the administrative record."*

The decision record will document the BLM's public interest determination and decision whether or not to approve the exchange of the identified BLM and SITLA parcels. The decision record will also document the BLM's decision whether to modify the terms of existing rights-of-way (ROWs) listed in Table 3.10-2.

1.5 Relationship to Statutes, Regulations, Plans, and Supporting Documentation

The land exchange would be processed pursuant to the Dingell Act as well as Section 206 of FLPMA and constitutes a federal action subject to the provisions of the National Environmental Policy Act (NEPA). During preparation of this EA, the BLM also ensured compliance with other relevant federal statutes and regulations, including Section 7 of the Endangered Species Act (ESA), Section 106 of the National Historic Preservation Act (NHPA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). A description of these statutes and regulations is provided in Table 1.5-1.

Table 1.5-1. Relevant Federal Statutes and Regulations for the Land Exchange

Regulation	Relationship to the Land Exchange
FLPMA	FLPMA requires that the consideration of an exchange of BLM and SITLA land or interests must include, among other things, an evaluation of how the exchange would serve the public interest and be based on equal market value established by appraisals, be subject to an environmental analysis, and provide for coordination with state and local governments, and/or affected property and public interests.
ESA	Section 7(a)(2) of the ESA requires that for actions authorized, funded, or carried out by a federal agency, that the agency shall, in consultation with USFWS and/or National Marine Fisheries Service, ensure that the action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of the endangered or threatened species. Agency coordination and consultation findings are disclosed in Chapters 4 and 3 of this EA, respectively.
NHPA	Projects that are federally permitted, licensed, or funded must comply with Section 106 of the NHPA. Section 106 requires that every federal agency consider the effects an undertaking, such as this land exchange, could have on historic properties. A historic property is defined as any cultural resource that is listed in or eligible for inclusion in the National Register of Historic Places (NRHP). The BLM conducted a literature review of each of the exchange parcels to identify all previously documented cultural resources. The literature review identified 428 previously recorded cultural resource sites within BLM and SITLA parcels and 11 sites within the equalization parcels. Of the 439 documented sites, 205 are considered eligible for the NRHP (i.e., historic properties). In consultation with the Utah State Historic Preservation Officer (SHPO), the BLM determined that this undertaking would have "no adverse effect" to historic properties. The BLM and the SHPO recognized that the future management of the proposed exchange parcels will be subject to the State of Utah's Annotated Code 9-8-404, which serves as an equivalent to Section 106 for state lands and future actions approved by the state on these lands. Therefore, this undertaking will not result in any adverse effects as there are adequate and legally enforceable restrictions to ensure

Regulation	Relationship to the Land Exchange
	long-term preservation of the historic properties' significance in accordance with 36 CFR 800.5(2)(vii).
CERCLA	CERCLA was passed by Congress in 1980 to identify and cleanup sites where hazardous materials threaten the environment and or public health. A comprehensive Phase I environmental site assessment of all exchange parcels would be conducted, in accordance with American Society for Testing and Materials International standards, in order to comply with CERCLA Section 120(h) and BLM policy. All BLM lands that would be conveyed to SITLA would include the federal notice requirements as detailed in 40 CFR Part 373 if hazardous substances were stored for 1 year or more, or are known to have been released or disposed of on-site.

Even though the land exchange would be inconsistent with management decisions regarding land tenure actions in some of the BLM's land use plans (e.g., a prohibition on conveyance of lands within certain greater sage-grouse [GRSG] habitat management areas unless there is a net conservation gain or no direct or indirect adverse impact on conservation of the GRSG, a limitation on disposal of lands to meet particular resource protection objectives, a restriction on conveyance of lands because they had not been identified for disposal, etc.), section 1255(b)(4)(B) of the Dingell Act states that the BLM "shall not be required to undertake any additional land use planning under section 202 of [FLPMA] before the conveyance of the [f]ederal land." Congress, therefore, has effectively waived any management decisions inconsistent with the land exchange in any applicable BLM land use plan.

1.6 Scoping and Identification of Issues

The internal scoping process began when Interdisciplinary Team staff from nine BLM FOs reviewed the exchange proposal and identified resources within the BLM, SITLA, and equalization parcels that could be affected by the land exchange due to changes to future land use or management. This analysis was conducted using current office records, geographic information system (GIS) data, site visits, and other relevant information.

The BLM initiated a 30-day public scoping period through a news release published on July 13, 2022, which invited the public to submit comments on the proposed land exchange on the BLM NEPA Register.[4,5] On May 25, 2023, the BLM initiated a 30-day comment period on the Draft EA, which the agency announced through a news release and an update to the BLM NEPA Register. Details on these outreach efforts are provided in Section 4.2. Public input provided during public scoping was used to refine issues developed during internal scoping. Additional issues were not identified by the public during the comment period on the Draft EA.

Through the internal and external scoping process, the following issues in Table 1.6-1 were identified for detailed analysis.

[4] The public was initially notified of the proposed land exchange through the NOEP, published on November 18, 2021, during the feasibility stage of the land exchange. Although public input was solicited, this step occurred prior to the NEPA process and does not represent an external scoping effort.

[5] The land exchange website is located online at the BLM's NEPA Register: https://eplanning.blm.gov/eplanning-ui/project/2020478/510.

Table 1.6-1. Issues Identified for Detailed Analysis

Resource	Issue Statement
Air quality	• What effects would changes to reasonably foreseeable future land uses have in relation to conformance with the National Ambient Air Quality Standards?
Climate change and greenhouse gases	• What effect would changes to reasonably foreseeable future land uses have on greenhouse gas emissions and climate change?
Cultural resources	• How would development associated with reasonably foreseeable future land uses result in damage or destruction of cultural resources?
Environmental justice	• Would the land exchange disproportionately and adversely affect environmental justice communities?
Fishes and aquatic animals (BLM- or USFWS-non-designated and designated species)	• How would development associated with reasonably foreseeable future land uses affect fish species and habitat potentially present on or downstream of affected parcels? • Would protection of special-status fish species and their habitat increase or decrease for BLM and SITLA parcels?
Floodplains	• How would development associated with reasonably foreseeable future land uses alter floodplain function within unmapped floodplain?
Fuels and fire management	• How would development associated with reasonably foreseeable future land uses affect fire or fuels risk? • How would the land exchange affect fuels and fire management responsibilities between BLM and SITLA jurisdiction?
Geology, mineral resources, and energy production	• What effect would the land exchange have on the net gain or loss of mineral resources within BLM and SITLA parcels? • When current encumbrances are up for renewal after the land exchange is complete, how would a change in terms and management conditions (from BLM to SITLA or vice-versa) affect mining claimants and energy producers? • How would reasonably foreseeable future land uses alter (increase or decrease) mineral resource development or energy production?
Lands access and realty	• How would the land exchange affect access to public land? • How would the land exchange impact water reserves and existing land use authorizations?
Livestock grazing and rangeland health	• What effect would the land exchange have on the net gain or loss of animal unit months within BLM and SITLA parcels? • What effect would the land exchange have on the transfer or exchange of ownership of existing range improvements? • When permits are up for renewal after the land exchange is complete, how would a change in permit terms, grazing fees, and/or management conditions (from BLM to SITLA or vice-versa) affect livestock grazing permittees? • How would reasonably foreseeable future land uses affect livestock grazing, via changes to water development or other range improvements or other restrictions on livestock grazing, such as fencing?
National Historic Trails	• How would the land exchange impact the nature and purpose of National Historic Trail segments that intersect or are within the viewshed of BLM or SITLA parcels?

Resource	Issue Statement
Paleontology	• How would reasonably foreseeable future land uses affect known paleontological localities or geologic units with potential (e.g., Potential Fossil Yield Classification 3, 4, 5, U) to contain paleontological resources? • How would the land exchange affect opportunities for casual paleontological resource collection or petrified wood?
Recreation	• How would reasonably foreseeable future land uses or changes in management alter existing recreational access or opportunities available to the public, such as vehicle exploration, OHV riding, hunting and shooting sports, mountain biking, equestrian, and non-motorized (backcountry, primitive, wilderness activities)? • What effect would the land exchange have on existing motorized use area designations and cherry-stemmed roads?
Socioeconomics	• How would the land exchange contribute to changes in socioeconomic market and non-market conditions including employment, government revenue, community sense-of-place, and ecosystem services? • How would the land exchange affect economic conditions due to long-term changes in grazing levels upon permit renewal, mineral lease payments, or changes to recreation (market) or non-market values?
Soils and farmland (prime or unique)	• How would development associated with reasonably foreseeable future land uses affect the structure, health, and function of soil resources? • How would development associated with reasonably foreseeable future land uses affect the conversion of prime farmland to nonagricultural uses?
Special management designations, lands with wilderness characteristics, and natural areas	• How would reasonably foreseeable future land uses or changes in management affect the following lands and the resource values and characteristics associated with them: o Lands within units of the BLM's National Conservation Lands (wilderness and wilderness study areas, national monuments, NCAs, and WSRs) o Lands within administrative designations like areas of critical environmental concern and inventoried lands with wilderness characteristics (including natural areas) o Lands within other designations
Vegetation (general and invasive species and noxious weeds)	• How would development associated with reasonably foreseeable future land uses affect the distribution or composition of vegetation resources? • How would development associated with reasonably foreseeable future land uses affect potential introduction or spread of invasive and noxious weeds?
Vegetation (BLM- or USFWS-designated species)	• How would development associated with reasonably foreseeable future land uses affect designated plant species (and/or habitat suitable for designated plant species)? • After the conveyance is complete, how would a change in management conditions alter protection of designated plant species?
Visual resources	• How would reasonably foreseeable future land uses affect scenery and views? • After the conveyance is complete, how would a change in management conditions alter protection of visual resources?

Resource	Issue Statement
Water resources	• How would development associated with reasonably foreseeable future land uses affect the flow regime, water quality, or water quantity (including drinking water sources)? • What effect would the land exchange have on water rights?
Wetlands and riparian areas	• How would development associated with reasonably foreseeable future land uses affect wetland fill or dredging? • How would development associated with reasonably foreseeable future land uses affect riparian habitat? • After the conveyance is complete, how would a change in management conditions affect protection of non-jurisdictional wetland areas not covered by Clean Water Act?
Wild horses and burros	• How would reasonably foreseeable future land uses affect wild horse and burro herd management areas?
Wildlife (general wildlife and BLM- or USFWS-designated species)	• How would development associated with reasonably foreseeable future land uses affect habitat or influence potential occurrence of non-designated wildlife species, migratory birds, big game species, sensitive species, GRSG, or threatened and endangered species? • After the conveyance is complete, how would a change in management conditions affect protection of special-status wildlife species or GRSG and their habitat?
Woodlands and forest	• How would development associated with reasonably foreseeable future land uses affect opportunities for harvest of woodland and forest products (e.g., timber, fuel wood, posts, and Christmas trees)?

Issues considered but not carried forward for detailed analysis are disclosed in Table 1.6-2, along with supporting rationale.

Table 1.6-2. Issues Considered but not Carried Forward for Detailed Analysis

Issue	Rationale for Dismissal
Cultural heritage – Native American religious concerns	Land tenure adjustments must consider how proposed changes in land ownership would affect off-reservation treaty rights, resources of Tribal concern, traditional use areas, and Indian religious practices. As such, a federal agency must consult with federally recognized Indian Tribes in accordance with NEPA and the American Indian Religious Freedom Act. In addition, Section 1255(g) of the Dingell Act directs the Secretary of the Interior to consult with any federally recognized Indian Tribe in the vicinity of the federal and non-federal lands. In November 2021, the BLM mailed project notification letters to Tribal governments within Utah and the surrounding region. In September 2022, the BLM sent follow-up project notification letters and letters inviting Tribes to participate as cooperating agencies for this NEPA effort. From this second letter, the Southern Ute Tribe responded with a letter on October 24, 2022. In this letter, the Southern Ute Tribe requested additional information on the proposed undertaking to evaluate potential impacts on properties of religious or cultural significance to the Tribe. The BLM responded by email on October 25, 2022, by sending a copy of the literature review to Tribal leaders along with an explanation of the BLM's proposed finding of effect under Section 106 of the NHPA. The BLM followed up by email on November 15, 2022, but did not receive a response. At this time, consultation is ongoing.

Issue	Rationale for Dismissal
Health and human safety	Potential land exchange actions that could affect human health and safety are addressed by other issues carried forward for analysis (air quality, water quality, floodplains, and fire and fuels management). As noted below, there are no known waste (hazardous or solid) issues located on the exchange parcels.
Transportation and access	Potential land exchange actions that could affect transportation and access are addressed by other issues carried forward for analysis (recreation, socioeconomics, fire and fuels management, and woodland and forestry). The BLM would maintain access to public lands by issuing road ROWs to the BLM prior to parcel conveyance to SITLA.
Wastes (hazardous or solid)	There are no known waste (hazardous or solid) issues located on exchange parcels. A comprehensive Phase I environmental site assessment of all exchange parcels would be conducted, in accordance with American Society for Testing and Materials International standards, in order to comply with CERCLA Section 120(h) and BLM policy. All BLM lands that would be conveyed to SITLA would include the federal notice requirements as detailed in 40 CFR Part 373 if hazardous substances were stored for 1 year or more, or are known to have been released or disposed of on-site.

Chapter 2. Description of Alternatives

Two alternatives, Proposed Action (Exchange) and No Action (No Exchange), are evaluated in this EA. Alternatives considered but not carried forward for detailed analysis are addressed in Section 2.3.

2.1 Proposed Action (Exchange)

Under the Proposed Action, the BLM would complete a land exchange as directed by the Dingell Act and pursuant to Section 206 of FLPMA. The lands identified for exchange encompass approximately 116,000 acres of SITLA land or interests and approximately 89,700 acres of BLM land or interests in land. These are preliminary acreages based on the parcels currently being considered for exchange. Some adjustments on both sides of the exchange have occurred, and further adjustments may occur following formal cadastral survey and more detailed title review of some of the parcels. Additionally, as stated in Section 1255(b)(2)(B) of the Dingell Act, SITLA and the BLM may mutually agree to set aside individual parcels in the event of any dispute or delay to allow the exchange of the other parcels to proceed.

The parcel locations are shown on the overview map in Figure 1.1, and detailed maps are provided in Appendix B. Legal land descriptions are available in Appendix A. A summary is provided below in Sections 2.1.1 and 2.1.2.

Section 1255(b)(1) of the Dingell Act mandates that "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." Additional provisions specific to the lands and interests in land to be conveyed and retained include the following:

- The exchange shall be subject to valid existing rights (Section 1255(b)(5)). Holders of valid ROW issued by BLM on the BLM parcels will be afforded the opportunity to amend their ROWs to establish a new term, including in perpetuity, for that ROW or, if applicable, to an easement.
- BLM land that is encumbered by a mining or millsite claim located under the 1872 Mining Law shall be appraised in accordance with standard appraisal practices, including the Uniform Appraisal Standards for Federal Land Acquisition (Section 1255(c)(4)(B)).
- The Secretary is not required to conduct a mineral examination for any mining claim on the BLM land (Section 1255(c)(4)(C)).
- Lands subject to a grazing lease, permit, or contract will be conveyed subject to the duration of the lease, permit, or contract, and with a preference for renewal (Section 1255 (i)(1) and (2)). However, a grazing permit, lease, or contract may be cancelled or modified if the BLM or SITLA lands subject to the permit, lease, or contract are sold, conveyed, transferred, or leased for non-grazing purposes except to the extent reasonably necessary to accommodate surface operations in support of mineral development (Section 1255 (i)(3)).
- Any BLM parcels or portions thereof determined to be within a 100-year floodplain zone identified by the Federal Emergency Management Agency (FEMA) will be conveyed

subject to a restriction limiting their use for purposes consistent with local ordinances for floodplain zones.

- The Secretary shall exclude from conveyance any BLM land that contains critical habitat designated for a species listed as an endangered species or a threatened species under the Endangered Species Act of 1973 (16 USC 1531 et seq.). Any BLM land excluded shall be the smallest area necessary to protect the applicable critical habitat (Section 1255 (b)(3)).

2.1.1 BLM Lands to be Conveyed to SITLA

BLM parcels would be located in the counties presented in Table 2.1-1.

Table 2.1-1. BLM Lands to be Conveyed to SITLA

County	Number of Parcels	Affected Parcels and Field Office	Acreage
Beaver	7	9, 10, 11, 12, 42, 43, 44 (CCFO)	Approximately 7,000 acres surface and minerals.
Carbon	1	21 (PFO)	Approximately 360 acres surface and minerals in the Cedar Ridge Area.
Emery	14	23, 24, 25, 26, 27, 28, 29, 30, 46, 46C, 47, 48, 50, 54 (PFO)	Approximately 19,880 acres surface and minerals, 40 acres oil and gas only, 120 acres coal only.
Iron	1	13 (CCFO)	Approximately 320 acres surface and minerals.
Juab	12	8, 35, 35M, 36, 37, 38, 38M, 38S, 39, 39S, 40, 41 (FFO)	Approximately 32,140 acres surface and minerals, 700 acres minerals only, 1,300 acres surface only.
Kane	1	33 (KFO)	Approximately 329 acres surface and minerals.
Millard	2	51M, 52M (FFO)	Approximately 3,700 acres minerals only.
Rich	8	1, 2S, 2, 3, 3S, 4, 5, 5S (SLFO)	Approximately 13,700 acres surface and minerals, 2,900 acres surface only in the Woodruff South area.
San Juan	1	32 (MFO)	Approximately 1,200 acres surface and minerals.
Sevier	1	49 (RFO)	Approximately 1,300 acres surface and minerals.
Summit	1	15 (SLFO)	Approximately 30 acres surface and minerals in the Silver Slope area.
Tooele	1	34 (SLFO)	Approximately 1,100 acres surface and minerals in the Mercur Canyon area.
Uintah	3	53, 53M, 53OG (VFO)	Approximately 1,600 acres surface and minerals, 395 acres minerals only, 480 acres oil and gas only.
Utah	2	6 (SLFO) 36 (FFO, SLFO)	Approximately 600 acres surface and minerals in the Lake Mountain North and Southwest Tintic areas.
Wasatch	3	15, 17, & 20 (SLFO)	Approximately 700 acres surface and minerals in the Silver Slope, Jordanelle West and Wallsburg areas.

SITLA would acquire both the surface and mineral estates for 44 parcels (80,100 acres), only the surface estate for five parcels (4,200 acres), only the mineral estate for five parcels (4,800 acres), only oil and gas and coal estate for one parcel (160 acres), and only the oil and gas estate for one parcel (480 acres).

The Dingell Act (Section 1255 (b)(5)) directs that all lands will be conveyed subject to valid and existing rights (subject to modification or cancellation under certain specified circumstances). Table 2.1-2 provides an overview of existing land use authorizations, claims, leases, and other encumbrances identified on BLM parcels. The Proposed Action considers effects that would occur if the federal coal leasing moratorium[6] is lifted in the future; however, the timing of reported impacts would be dependent on when the moratorium is lifted.

The reasonably foreseeable future land uses of the BLM parcels are described in Section 3.1.1. BLM parcels are currently open for grazing, ROWs, mineral leasing, and location of mining claims under the mining laws. SITLA is expected to continue authorization of these types of activities once it acquires title. Over time, the management and use of particular parcels could change depending upon the policies and direction of SITLA.

Table 2.1-2. BLM Land Encumbrances

Type	Affected Parcels	Management Provisions Established by the Dingell Act
Land use authorizations for ROWs, easements, rights-of-entry, and special land use authorizations	1, 2, 4, 5, 5S, 8, 9, 10, 11, 12, 13, 15, 17, 21, 23, 24, 26, 28, 29, 32, 33, 34, 35, 36, 38, 38S, 39, 42, 46, 49, 50, 53, 53M, 53OG	BLM parcels that are encumbered by land use authorizations would be conveyed to SITLA subject to the valid existing rights and would be handled in accordance with 43 CFR 2807.15 and provisions of the Dingell Act. All ROW holders have been notified of the exchange and provided an opportunity to file an application to request an amendment to their grants (or affected portions thereof) to a perpetual term, if applicable, or to apply to convert their ROW grant (or affected portions thereof) to easements prior to conveyance of the BLM land.
Administrative withdrawals	1, 36, 38S, 54	Administrative withdrawals would automatically revoke upon transfer of the land in accordance with PLO 5444, as amended by PLO 6527.
Active mining claims	12, 17, 28, 34, 35, 35M, 36, 37, 38, 38S, 39, 39S, 40, 41, 42, 43, 44	Federal parcels that are encumbered by federal mineral leases, mining claims, mineral material claims, permits, and geothermal leases would be conveyed with the encumbrance, and access and use of existing operations would continue under the applicable terms of the encumbrance unless a new contractual arrangement were negotiated between the lessee/permittee/claimant and SITLA. SITLA has agreed to take title to these parcels subject to the claims and to any and all rights that the holders thereof may have pursuant to the laws of the United States and the State,

[6] On January 15, 2016, former Secretary of the Interior Sally Jewell established a moratorium on federal coal leasing and directed the BLM to conduct a programmatic review of the federal coal program through the preparation on an EIS under NEPA. On March 29, 2017, former Secretary of the Interior Ryan Zinke issued an order halting preparation of this EIS and lifting the moratorium. Various states and organizations challenged the order lifting the moratorium in federal district court. See *Citizens for Clean Energy, et al. v. U.S. Dep't of the Interior, et al.*, 4:17–cv–00042–BMM (D. Mont. 2022). On August 12, 2022, the district court reinstated the coal leasing moratorium "until the completion of sufficient NEPA review analyzing the revocation of the moratorium." Even though this ruling has been appealed, the coal leasing moratorium is currently in effect.

Type	Affected Parcels	Management Provisions Established by the Dingell Act
		provided there is no conflict with State law. The claimants would be provided with notice of the exchange and with additional information for future filings. Although it is not specifically dictated in the Dingell Act, active mining claims would be administered per Section 11 of the Agreement for Exchange of Lands West Desert State–Federal Land Consolidation, approved May 30, 2000. Both SITLA and the BLM agree that the process and precedent initiated by that agreement is the most efficient and effective way to administer the many mining claims associated with this exchange as well. Where BLM lands being acquired by SITLA are encumbered by unpatented mining claims located under the authority of the Mining Law of 1872, SITLA's governing statute provides that the acquired lands are subject to the vested rights of unpatented mining claimants and other federal vested rights, both surface and mineral (Utah Code Annotated 53C-2-407(7)). However, the rights of a federal unpatented mining claimant on SITLA lands under Utah Code Annotated 53C-2-407(7) are expressly made subject to Utah Code Annotated 53C-2-104, which creates a state registration system for federal unpatented mining claims located on lands acquired by SITLA. Under Utah Code Annotated 53C-2-407(7), a mining claimant must make an annual filing with SITLA, as described in the statute, and pay an annual filing fee not to exceed $100 per claim. In summary, the owner of unpatented mining claims may maintain and develop the claims as valid existing rights by compliance with the filing of the annual notice and fee with SITLA, without payment of a royalty to SITLA, but subject to the right of the state or a third party to contest the underlying validity of the claim in state court.
Grazing permits	1, 2, 2S, 3, 3S, 4, 5, 5S, 6, 8, 9, 10, 11, 12, 21, 23, 24, 25, 28, 29, 30, 32, 34, 35, 36, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 53, 54	BLM parcels encumbered by the grazing permits would be conveyed with continued grazing use through the duration of the permits, subject to the provisions of the Dingell Act. Permanent range improvements would be assessed to determine if any permittees are entitled to compensation pursuant to 43 CFR 4120.3-6. Affected grazing permittees were notified at the time of the NOEP. Affected permittees would also be provided official notice of the exchange after the decision, in accordance with 43 CFR 4110.4-2(b), as well as the provisions of the Dingell Act pertaining to the continuance, renewal, and cancellation of the permits. Upon a permit's expiration, the Animal Unit Months (AUMs) gained from the BLM grazing permits would be subject to SITLA policies regarding grazing permit renewal. SITLA would provide a preference for renewal to the existing permit holder. Current SITLA policy (Board of Trustees Policy Statement 2013-02) provides that grazing permits issued on SITLA lands acquired through an exchange with the federal government shall not be subject to agency rules pertaining to competitive applications for two consecutive 15-year terms. While grazing is expected to continue on the affected parcels,

Type	Affected Parcels	Management Provisions Established by the Dingell Act
		the Dingell Act provides for the cancellation or modification of the permit should any of the affected lands be subsequently sold, conveyed, or leased for non-grazing purposes by SITLA.
Water rights	1, 2, 3, 5, 8, 11, 24, 25, 36, 37, 38, 38S, 46, 48, 49, 53, 54	Any conveyance of a parcel of BLM land under Subsection (b)(1) would include the conveyance of water rights appurtenant to the parcel conveyed.
National Historic Trails	23, 25, 32, 33, 49, 50	BLM parcels conveyed to SITLA containing a National Historic Trail would no longer be subject to the provisions of the National Trails System Act. SITLA complies with Utah Code (9-8-404), which requires state agencies to consider the impacts on historic and archaeological resources, consult with SHPO on anticipated impacts, and mitigate adverse effects to such resources.

2.1.2 SITLA Lands to be Conveyed to the BLM

SITLA parcels are located in the counties presented in Table 2.1-3.

Table 2.1-3. SITLA Lands to be Conveyed to the BLM

County	Number of Parcels	Affected Parcels & Field Office	Acreage
Emery	193	SE112-SE134, SE135A-B, SE136-SE149, SE150A, SE151-SE156, SE157A, SE158A, SE159, SE160A, SE161-SE202, SE203A-B, SE204, SE205, SE206A-B, SE207-SE212, SE213A-B, SE214, SE215, SE216A-C, SE217-SE223, SE224A-B, SE225-SE278, SE279A, SE280A, SE281, SE282, SE283A, SE284A, SE285, SE286, SE287A, SE288A, SE289, SE290, SE291A, SE292A, SE293A, SE294, SE295, SE296A, SE297A (PFO)	Approximately 109,300 acres surface and minerals within or adjacent to designated wilderness or the San Rafael Swell Recreation Area.
Grand	1	SE150B (MFO)	Approximately 1 acre surface and minerals in the Horseshoe Canyon area.
Uintah	11	SE101- SE111 (VFO)	Approximately 4,700 acres surface and minerals in the John Wesley Powell National Conservation area, and McCoy Flats Trail System

County	Number of Parcels	Affected Parcels & Field Office	Acreage
Wayne	14	SE157B, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, SE297B (RFO)	Approximately 900 acres surface and minerals adjacent to designated wilderness.

The SITLA lands are enumerated as distinct parcels, but some parcels abut others and, therefore, together form larger contiguous blocks of land.

The BLM would acquire both the surface and mineral estates for 206 parcels (114,900 acres), and 13 parcels are mineral estate only (1,100 acres). Sand and gravel resources on mineral only estate is typically owned by the surface owners and would not be conveyed in the exchange. This is pursuant to Utah Code 53C-2-401 and 65A-6-1, under which coal and mineral deposits in State-owned lands are reserved to the SITLA upon conveyance; however, common varieties of sand, gravel, and cinders are not considered to be minerals and are conveyed with the surface unless reserved by specific action of the Director of SITLA. SITLA would convey three parcels (SE101, SE116, SE117) with sand and gravel resources to the BLM because SITLA reserved the sand and gravel rights when the agency sold the surface estate to private buyers.

Additionally, up to approximately 2,031 acres (surface and mineral estate) of equalization lands in Washington County may be included in the exchange, if needed for value equalization purposes.[7] These lands include six parcels (equalization parcels 3C, 3D, 3E, 7A, 7B, 7C) within the Red Cliffs NCA (see Appendix B). SITLA's preferred disposal order, if needed, is as follows (ordered from highest to lowest priority): 3C, 3D, 3E, 7C, 7B, 7A.

Under Section 1255(b) of the Dingell Act, lands acquired by the United States would be managed in accordance with FLPMA. Regulations at 43 CFR 2200.0-6(f) further provide that land acquired through exchange would become part of, and be managed as part of, the federal administrative unit or area within which the land is located. Consequently, and as noted in Section 1.4, SITLA lands, once conveyed to the BLM, would generally be managed for resource protection and recreation use in the foreseeable future, although grazing, ROWs, mineral development, and other uses could occur where conveyed with existing encumbrances. Future renewal would be subject to BLM rates, policies, and provisions.

Table 2.1-4 provides an overview of land use authorizations, claims, leases, and other encumbrances, as well as other designations identified on SITLA parcels.

[7] Under section 1255(f) of the Dingell Act, the value of the federal land must equal the value of the non-federal land to be exchanged. If land values are not equal, this section identifies means to equalize the exchange through payment or adjustment (addition or removal) of parcels included in the exchange.

Table 2.1-4. SITLA Land Encumbrances and Other Designations

Type	Affected Parcels	Management Provisions Established by the Dingell Act
Land use authorizations for ROWs, easements, rights-of-entry, and special land lease agreements	SE102-SE111, SE123, SE128, SE129, SE150A, SE157A, SE161-SE163, SE165, SE167-SE171, SE173, SE192, SE197-SE199, SE207, SE210, SE213A, SE215, SE218, SE224A, SE228, SE229, SE230, SE231, SE232, SE246, SE247, SE249, SE251, SE252, SE257, SE258, SE266, SE274, SE276, SE285, SE286, SE288A, SE288B, SE289	SITLA parcels that are encumbered by land use authorizations would be conveyed with the existing encumbrances. The BLM would administer the agreements through the remainder of their term, and renewal would be subject to BLM rates and provisions. SITLA notified all holders of third-party rights shortly after the NOEP was published by the BLM.
Grazing permits	SE102, SE103, SE107-SE115, SE118-SE120, SE122-SE126, SE128-SE134, SE135B, SE136, SE138-SE148, SE150A, SE150B, SE151-SE156, SE157A, SE157B, SE159, SE161-SE205, SE206A, SE207-SE212, SE213A, SE214, SE215, SE216A, SE217-SE223, SE224A, SE225-SE261, SE263, SE264, SE266-SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE285, SE286, SE287A, SE287B, SE288A, SE288B,SE289, SE290, SE291A, SE291B, SE292A, SE292B, SE293A, S293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B	SITLA lands encumbered by the grazing permits would be conveyed with continued grazing use through the remainder of the permits, subject to the provisions of the Dingell Act. SITLA parcels acquired by the BLM that fall within established BLM grazing allotments would be open for grazing and managed in a similar manner to other lands within that allotment. To accommodate any applicable changes in AUMs on existing federal grazing permits, the BLM would modify grazing permits, as appropriate, in accordance with the regulations within 43 CFR Part 4100. Permittees were notified shortly after the NOEP was published by the BLM about the exchange and the provisions of the Dingell Act pertaining to the continuance, renewal, and cancellation of the permits. At a permit's expiration, the AUMs gained from SITLA grazing permits would be subject to BLM policies regarding grazing permit renewal. The BLM would provide a preference for renewal to the existing permit holder. While grazing is expected to continue on the affected parcels, the Dingell Act provides for the cancellation or modification of the permit should any of the affected lands be subsequently sold, conveyed, or leased for non-grazing purposes by the BLM.
State mineral leases	SE108-SE111, SE154, SE156, SE157A, SE157B	Lands encumbered by state mineral leases and permits would be conveyed subject to the mineral leases. The BLM would administer the leases through the remainder of their current term, and renewal would be subject to BLM rates and provisions. SITLA notified all mineral lessees shortly after the NOEP was published by the BLM. For those parcels in which the BLM would acquire only the associated mineral estate, unless specified otherwise by the Dingell Act, the minerals would be managed similar to adjacent or surrounding minerals and in accordance with the associated land use plans.

Type	Affected Parcels	Management Provisions Established by the Dingell Act
Water rights	SE102, SE104-SE106, SE111, SE120, SE121, SE130, SE133, SE135B, SE142, SE207, SE210, SE213A, SE215, SE220, SE224A, SE226, SE227, SE232, SE247, SE250-SE253, SE262, SE266, SE269- SE271, SE273, SE276, SE278, SE282, SE285, SE286, SE287A, SE287B, SE288A, SE288B, SE291A, SE291B, SE297A, SE297B	Water rights held by the State for stock watering would be conveyed to the United States.
Wilderness	SE112-SE134, SE135A, SE135B, SE136-SE149, SE150A, SE151-SE156, SE157A, SE158S, SE159, SE160A, SE161-SE202, SE203A, 203B, SE204, SE205, SE206A, SE207-SE212, SE213A, SE214, SE215, SE216A-216C, SE217-SE223, SE224A, SE224B, SE225-SE261, SE263, SE264, SE266-SE278, SE279A, SE280A, SE281, SE282, SE283A, SE284A, SE285, SE286, SE287A, SE288A, SE289, SE290, SE291A, SE292A, SE293A, SE294, SE295, SE296A, SE297A	Acquired lands that are fully within a wilderness boundary (i.e., inholdings) would be added to and administered as part of the wilderness under the authority of 43 CFR 2200.0-6(f) and (g), and from that time forward subject to the provisions of the Wilderness Act, the enabling legislation for the wilderness area, and BLM Manual 6340, *Management of Designated Wilderness Areas* (BLM 2021a); these lands would also be withdrawn from mineral leasing and closed to other forms of mineral development, subject to valid existing rights. Lands being acquired that are on the edge of the wilderness or outside of the designated wilderness boundary would not be added to or managed as designated wilderness. Acquired lands that would become designated wilderness, NCA, or subject to the National Trails System Act (16 USC 1244) would also be managed as part of the National Landscape Conservation System, established under Public Law 111-11 Section 2002.

2.2 No Action (No Exchange)

Under the No Action, the land exchange directed by Section 1255(b) of the Dingell Act would not occur, and ownership and management of the BLM and SITLA parcels would not change. The analysis of this alternative provides baseline information for the public and would assist the BLM authorized officer in rendering a decision on whether the exchange would be in the public interest. The No Action also considers a scenario in which the current federal coal leasing moratorium would continue indefinitely if parcels are not conveyed. Under this scenario, new coal leasing would not occur on BLM lands, reclamation of the Lila Canyon Mine would be implemented, and alternative sources of energy would be substituted to meet electrical power needs.

2.3 Alternatives Considered but Not Carried Forward for Detailed Analysis

The BLM considered but did not carry forward for detailed analysis the alternatives described in Sections 2.3.1 through 2.3.3.

2.3.1 Phased Conveyance

Section 1255(b)(2) of the Dingell Act states that "[n]otwithstanding that appraisals for all of the parcels of BLM land and SITLA land may not have been approved under subsection (c)(5),

parcels of the BLM land and SITLA land may be exchanged under paragraph (1) in phases, to be mutually agreed by the Secretary and SITLA, beginning on the date on which the appraised values of the parcels included in the applicable phase are approved." It is important to note that while the Dingell Act authorizes the land exchange to be completed in phases, it does not require this approach.

At the beginning of the land exchange process, the BLM and SITLA mutually agreed to complete the exchange in a single phase because of timing considerations and costs associated with a phased approach. The EA considers direct, indirect, and cumulative impacts over and up to a 5-year period as the land exchange is implemented. Based on the Congressional mandate to complete the land exchange, the BLM considers it likely that even under a phased approach, the land exchange would still be completed within a 5-year time frame. Additionally, use of a phased approach would likely increase administration costs for BLM and SITLA by requiring additional staff hours to implement the land exchange as compared to the Proposed Action, as described in Section 2.1 of this EA.

Even so, the BLM considered a phased conveyance alternative during the early development of the EA. However, this alternative was eliminated from detailed analysis because it would ultimately have substantially similar (or identical) effects to the Proposed Action. This decision is consistent with the BLM NEPA Handbook (BLM 2008h), which identifies substantially similar effects as a rationale for dismissing alternatives from detailed analysis. As one example, phased conveyance would not change the number of known archaeological properties transferred from the BLM to SITLA. Although the timing of reasonably foreseeable future land uses associated with BLM parcels containing archaeological properties could change, if some parcels were delayed in conveyance, SITLA would still need to comply with Utah Code 9-8-404, which requires state agencies to likewise consider the effects of their actions on National Register of Historic Places (NRHP)–eligible properties. Therefore, reasonably foreseeable future land uses would not result in an appreciable adverse impact to management of cultural resources under either a single phase or phased conveyance approach. Similarly, other resources evaluated in this EA could have some short-term temporal differences in effect, but impacts would otherwise be the same over the long term.

2.3.2 Purchasing SITLA Parcels

Under this alternative, the BLM considered purchasing the SITLA parcels. Although the agency could acquire these parcels under existing authorities, assuming that SITLA was a willing seller, it would not meet the purpose and need (see Section 1.3). Since SITLA lands sales are subject to Utah Code Annotated 53C-4-102(3) and Utah Administrative Code R850-80—which require that the agency advertise proposed sales and consider any expressions of competitive interest in the property—acquiring the SITLA parcels through purchase would also likely require significantly more budgetary resources and—depending on the availability of appropriations—time to complete than it would under the Proposed Action. It is possible if the BLM were to pursue purchasing SITLA parcels that they could be outbid by other interested parties. Therefore, this alternative was eliminated from further consideration.

2.3.3 Conservation Easements and/or Deed Restrictions

Under this alternative, the BLM would place conservation easements or deed restrictions on certain parcels to ensure protection of various resources after they were conveyed to SITLA; however, Section 1255(b)(1)(B) of the Dingell Act states that the BLM must convey to SITLA

"*all* right, title, and interest of the United States in and to the Federal land" (emphasis added). This statutory language precludes the BLM from placing conservation easements or deed restrictions on the BLM parcels prior to their exchange to SITLA. Consequently, this alternative would not meet the purpose and need (see Section 1.3). Even if the text of the Dingell Act permitted the placing of conservation easements or deed restrictions on BLM parcels to be conveyed to SITLA, such limitations would not be necessary to ensure protection of a wide variety of sensitive natural resources, including fish and wildlife habitat, water quality, air quality, and cultural or paleontological resources, because the State of Utah must also comply with the requirements of the ESA, Clean Water Act (CWA), Clean Air Act (CAA), Utah Codes Annotated 9-8-301 to 308 and 9-8-404, Utah Code Annotated 79-3-501 through 510, and other applicable laws.

2.3.4 Removing Parcels from the Exchange

As suggested by a commenter, the BLM considered an alternative that would remove additional federal parcels from the exchange in various configurations to achieve certain resource objectives. In particular, the BLM considered

1. removing parcels 46–50 and 46C, encompassing approximately 6,230 acres, to reduce potential air quality and climate impacts associated with coal development;
2. removing parcels 21, 29, 32, 43–44, 46–48, 46C, and 54, encompassing approximately 13,164 acres, to avoid potential impacts to lands inventoried and found by the BLM to have wilderness characteristics; and
3. removing parcels 9–13, 23–30, 35–40, 38S, 39S, 42, 43, 46–50, 53, and 54 remaining in the land exchange,[8] encompassing approximately 60,058 acres, to avoid potential habitat for certain threatened and endangered plants, including the San Rafael cactus (*Pediocactus despainii*), Ute ladies'-tresses (*Spiranthes diluvialis*), last chance townsendia (*Townsendia aprica*), and Wright fishhook cactus (*Sclerocactus wrightiae*).

However, this alternative—in each of its variations—was dismissed from detailed analysis because it would not meet the purpose and need (see Section 1.3). As an initial matter, the BLM lacks the discretion to unilaterally drop parcels from a legislated land exchange subject to Section 206 of FLPMA before it can evaluate whether the exchange of those parcels is in the public interest. Instead, Section 1255(b)(2)(B) of the Dingell Act states that "if any dispute or delay arises with respect to the exchange of an individual parcel of Federal land or non-Federal land . . . the Secretary and the State may *mutually* agree to set aside the individual parcel to allow the exchange of the other parcels of Federal land and non-Federal land to proceed" (emphasis added). As authorized by Section 1255(b)(4)(A) of the Dingell Act, and as noted in Sections 1.3 and 1.4, the BLM will use the analysis of potential effects contained in the EA to determine whether the exchange of the identified parcels is in the public interest. Importantly, the BLM notes that this discretion is not limitless; using it to remove thousands or tens of thousands of acres of federal parcels from a legislatively directed exchange "because it is not in the public interest" would likely be inconsistent with congressional intent.

Even if the Dingell Act permitted the BLM to unilaterally remove any number of parcels from the exchange, or if SITLA agreed to set those parcels aside, this alternative would have substantially similar (or identical) effects as the No Action and/or the Proposed Action. For

[8] As described in Section 1.2 of the EA, portions of parcels 23, 26 and 53 have already been dropped by mutual agreement with SITLA.

example, the effects of removing parcels 46–50 (to reduce potential air quality and climate impacts associated with coal development) are already analyzed in the No Action's low-development and high-development coal scenarios (see Sections 3.2 and 3.3). If these parcels remain in federal management and the coal leasing moratorium remains in place for the foreseeable future, they would not be used to expand adjacent coal mining operations and would not contribute to potential air quality and climate impacts associated with those activities. If, on the other hand, the coal leasing moratorium were lifted and the BLM could resume issuing new coal leases, these parcels could be developed for coal, with similar effects to the Proposed Action.

Similarly, the effects of removing parcels 21, 29, 32, 43–44, 46–48, 46C, and 54 (to avoid inventoried lands with wilderness characteristics) are already analyzed in the No Action and the Proposed Action. With respect to this variation of the alternative, it is important to note that the BLM has chosen, as part of the land use planning process, not to manage these parcels for the protection, improvement, or maintenance of wilderness characteristics. Instead, the BLM is managing them for other multiple uses. Although some potential development would be temporarily precluded from occurring (e.g., coal development) on the parcels should they remain in federal management, each of the other anticipated uses could occur regardless of whether the parcels were conveyed to SITLA.

Finally, the effects of removing parcels 9–13, 23–30, 35–40, 38S, 39S, 42, 43, 46–50, 53, and 54 (to avoid potential habitat for certain threatened and endangered plant species) are already analyzed in the No Action and the Proposed Action. Although there may be potential habitat for the species identified by the commenter on these parcels, there are no known populations present on them. As with the variation of this alternative that would avoid inventoried lands with wilderness characteristics, most anticipated uses could occur regardless of whether the parcels were exchanged. For those uses that are permanently or temporarily precluded on BLM-administered lands, the No Action effectively analyzes the effects of not conveying those parcels to SITLA.

Chapter 3. Affected Environment and Environmental Consequences

3.1 Analysis Assumptions and Guidelines

This EA evaluates how the proposed land exchange could adversely or beneficially impact resources present on BLM, SITLA, and equalization parcels. In particular, the analysis considers effects associated with 1) reasonably foreseeable changes in future land use that would occur on conveyed parcels, and 2) changes in resource management due to differing federal or state guidance or regulations. Where possible, impacts from reasonably foreseeable future land use activities on land exchange parcels are quantified and compared to existing conditions for context. Parcels with no anticipated change in land use or management are not analyzed in detail in this EA.

Unless otherwise stated in Sections 3.2 to 3.24, direct, indirect, and cumulative land exchange impacts are described and evaluated within the BLM, SITLA, and equalization parcel boundaries. This spatial scale was established because it encompasses all effects associated with the proposed land exchange, as well as other reasonably foreseeable actions that could geographically overlap with the land exchange. The temporal scale is set at 5 years and was established to allow for the minimum amount of time the BLM would use to transfer or close out administrative records due to this land exchange.

All stipulations in the Dingell Act regarding the conveyance of existing encumbrances are incorporated into this analysis (see Chapter 2). Additionally, the following assumptions were applied during analysis:

- Where future land use actions are proposed and detailed design has not yet been completed, this analysis assumes the actions would use typical design standards and maintenance techniques for their construction and operation.
- Current trends in demand for water use would continue.
- Current water supply trends would continue, which are expected to fluctuate based on varied precipitation over time.

3.1.1 Current and Reasonably Foreseeable Future Land Uses After Conveyance

Tables 3.1-1 and 3.1-2 identify current and reasonably foreseeable future land uses for BLM, SITLA, and equalization parcels evaluated in this EA, based on input provided by SITLA and the BLM's Interdisciplinary Team.

3.1.2 Cumulative Scenario

The cumulative scenario (Table 3.1-3) identifies additional present and reasonably foreseeable trends and actions that could result in future physical, biological, or social impacts that intersect—in time and space—with future SITLA and BLM actions occurring on BLM, SITLA, or equalization parcels. The cumulative scenario includes projects with an existing decision, a commitment of resources or funding, or a known proposal. Actions that are highly probable based on known trends (e.g., residential development in urban areas) are also considered. Past actions and present actions with no anticipated future impacts are accounted for in the description of the affected environment presented for each resource in Chapter 3.

Table 3.1-1. Current and Reasonably Foreseeable Future Land Uses for BLM Parcels

Parcels	Current Land Use	Reasonably Foreseeable Future Land Use
1–5, 2S, 3S, and 5S	Federal land use authorizations (ROWs); livestock grazing; commercial guided hunting	These parcels are interspersed within lands owned by Deseret Land and Livestock. Deseret Land and Livestock has expressed interest in acquiring these parcels from the State of Utah via sale or exchange to consolidate land ownership and simplify management. Anticipated uses include livestock grazing and rangeland and commercial guided hunting.
6	Livestock grazing; developed and dispersed recreation	Approximately one half of the parcel has future residential development potential with the remainder continuing as open space. Development of the parcel is contingent upon market forces and the pattern of growth on adjacent lands in Eagle Mountain and Saratoga Springs. Any development of the property is not likely to take place for 10 or more years after the exchange is completed. Anticipated use would include developed and dispersed recreation, including target shooting and developed trail system for OHV riding and mountain biking.
8–13	Federal land use authorizations (ROWs); livestock grazing	SITLA has indicated that these parcels have lease potential for future solar energy development.
15	Federal land use authorizations (ROWs)	SITLA has indicated that this parcel has potential to be sold or leased for residential development purposes. No third-party agreements have been made for this parcel.
17	Federal land use authorizations (ROWs)	SITLA entered into an Option to Purchase agreement with BLX Land LLC in the event that SITLA acquires this parcel. If acquired by BLX Land LLC, it is anticipated the lands would be incorporated into their proposed resort development and used for skiing, hiking, and biking trails and open space. The BLX Mayflower Trails Project ROW has been issued under UTU-94905 and construction has been started.
20	No known activities	Parcel would be held in SITLA's land portfolio for long-term appreciation. No specific SITLA uses are currently contemplated; however, the northern portion of this parcel is adjacent to a state wildlife reserve/management area east of Deer Creek Reservoir. Future activities likely include dispersed recreation such as hunting and OHV riding.
21	ROWs; livestock grazing	Adjacent landowner has expressed interest in purchasing this parcel. Anticipated uses would be livestock grazing, hunting, and wildlife habitat.
23–25	ROWs; livestock grazing; oil and gas	Lease for solar energy development consistent with proposed solar development on adjacent lands.
26	Recreation; ROWs	Parcel would be held in the SITLA's land portfolio for long-term appreciation. SITLA has indicated that this parcel has future potential for recreational development (cabin site, glamping, etc.) associated with adjacent state park and golf course.

Parcels	Current Land Use	Reasonably Foreseeable Future Land Use
27	Oil and gas lease	Parcel would be held for long-term appreciation. A local irrigation company has previously expressed interest in acquiring the parcel for a potential future reservoir site. No third-party agreements have been made for this parcel.
28–30	Mining; ROWs; livestock grazing	SITLA has indicated that these parcels have potential for future industrial development. Emery County has expressed interest in leasing portions of the property for future industrial development, but no specific uses or projects are currently contemplated. Current uses for livestock grazing and open rangeland would likely continue for the next several years.
32	Federal land use authorizations (ROWs); livestock grazing	Parcel would be held in SITLA's land portfolio for long-term appreciation. No specific uses are currently contemplated.
33	Federal land use authorizations (ROWs); livestock grazing	SITLA has indicated that this parcel has lease potential for future solar energy development.
34	Federal land use authorizations (ROWs); livestock grazing. This parcel is also located within the Fivemile Pass Recreation Area, which is popular for dispersed camping and OHV riding.	SITLA has indicated that this parcel has lease potential for hard-rock mineral exploration in a historic mining district. Whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluations and future market demands.
35–40, including 35M, 38M, 38S, 39S	Mining; ROWs; livestock grazing	SITLA has indicated that these parcels have lease potential for metallic mineral exploration. Whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluations and future market demands.
41	Mining; livestock grazing	SITLA has indicated that this parcel has lease potential for beryllium exploration. Whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluation and future market demands.
42	Mining; transmission; livestock grazing	SITLA has indicated that this parcel has potential for mineral exploration in a historic mining district. Whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluation and future market demands.
43–44	Mining; transmission; livestock grazing	SITLA has indicated that these parcels have potential for molybdenum exploration. Whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluations and future market demands.
46–48 and 46C	Coal; ROWs; livestock grazing	Potential lease to operator of the Lila Canyon coal mine for the anticipated expansion of underground mining operations into the Williams Draw coal tract.

Parcels	Current Land Use	Reasonably Foreseeable Future Land Use
49	ROWs; coal; livestock grazing	SITLA has indicated that this parcel has potential for expansion of underground coal mining operations into the Walker Flat tract of the existing Emery Deep Mine.
50	ROWs; coal; livestock grazing	SITLA has indicated that this parcel has potential for expansion of underground coal mining operations into the Walker Flat tract of the existing Emery Deep Mine.
51M–52M	Mining	Land exchange is for mineral estate only. Potential future expansion area for salt cavern storage project located on adjacent lands.
53, 53M, 53OG	Federal land use authorizations (ROWs); livestock grazing	Parcel would be held in the SITLA's land portfolio for long-term appreciation. SITLA has indicated that these parcels have lease potential for oil and gas.
54	ROWs; oil and gas; livestock grazing	Exploration of potential helium resource. Whether or not the helium resource is developed, and the timing and extent of any such development, would be contingent upon the results of the resource evaluation and future market conditions. Pending pipeline ROW application and applications for permit to drill.

Table 3.1-2. Current and Reasonably Foreseeable Future Land Uses for SITLA and Equalization Parcels

Parcels	Current Land Use	Reasonably Foreseeable Future Land Use
SE101–SE297B (excluding Wayne County parcels noted in the following row)	No information available	Recreation allowed, withdrawn from entry, appropriation, or disposal under the public lands laws; location, entry, and patent under the mining laws; and operation of the mineral leasing, mineral materials, and geothermal leasing laws. Parcels would be conveyed with existing encumbrances for grazing, land use authorizations, and mineral leases. Any future renewal, however, would be subject to BLM policies, rates, and provisions.
SE157B, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, SE297B	No information available	All activities would be managed according to the RFO RMP (BLM 2008g). Parcels would be conveyed with existing encumbrances for grazing, land use authorizations, and mineral leases. Any future renewal, however, would be subject to BLM policies, rates, and provisions.
3C–3E, 7A–7C (equalization parcels)	No information available	Recreation allowed, closed to both mineral entry and grazing. Parcels would be conveyed with existing encumbrances for grazing, land use authorizations, and mineral leases. Any future renewal, however, would be subject to BLM policies, rates, and provisions.

Table 3.1-3. Other Present and Reasonably Foreseeable Trends and Actions

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
Natural gas interstate pipelines	In operation.	9.366	1, 4, 8, 11, 32, 5S (intersects parcel) 2, 5, 13 (within 1 mile of parcel)
UNEV petroleum product pipeline	In operation.	3,177	35, 38, 39, 38S (intersects parcel) 10, 12, 35M, 38M, 39S, 52M (within 1 mile of parcel)
Oil wells (Uinta-Piceance Basin and Wyoming Thrust Belt)	In operation.	3,987	2, 2S, 53M, 53OG (within 1 mile of parcel)
Escalante Solar I, LLC	In operation; 80 MW.	566	9, 10 (within 1 mile of parcel)
Escalante Solar II, LLC	In operation; 80 MW.	529	9, 11, 12 (within 1 mile of parcel)
Escalante Solar III, LLC	In operation; 80 MW.	7	9, 11, 12 (within 1 mile of parcel)
Milford Solar 1	In operation; 99 MW.	725	9–12 (within 1 mile of parcel)
Notch Peak Solar	Preconstruction; expected to start operations in 2025; 325 MW.	2,627	51M, 52M (estimated to be (within 1 mile of parcel)
Conventional steam coal power plant (Intermountain Power Project)	In operation; 1,900 MW.	1,611	51–52M (intersects parcel)

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
Restoration and Fuels Reduction Prescribed Fire Project (Manti-La Sal National Forest)	Authorizes prescribed burns across the forest every year (up to 31,248 acres per year) over the next 15 to 20 years (starting 2022).	Not available	26 (National Forest boundary within 1 mile of parcel)
Salt Lake City International Airport new master plan and South Valley Regional Master Plan (Salt Lake City Department of Airports 2022)	Annual landings and takeoffs at the Salt Lake City International Airport are forecast to grow at an average annual rate of 1.4%, from approximately 325,000 landings and takeoffs in 2017 to 435,000 landings and takeoffs in 2037. South Valley Regional Master Plan also predicts airport growth through 2040.	Not available	6 (within approximately 20–30 miles of parcel)
Milford Wind Corridor Stage I and II	In operation.	27,675	11 (within approximately 1 mile of parcel) 9, 10 (within approximately 2–3 miles of parcel)
Spanish Valley Community Plan (SITLA)	Mixed residential, institutional, and commercial development. A 2019 request for proposals indicated development of a 10-acre and 13-acre parcel.	4,908	32 (southern end of development is directly adjacent to parcel)
Saratoga Springs Development (SITLA)	Mixed-use residential community development proposed on approximately 1,200 acres.	1,206	6 (within approximately 1–2 miles of parcel)
Eagle Mountain Development (SITLA)	Mixed residential, civic, and commercial development within two parcels, Mid-Valley and Pony Express.	1,329	6 (within approximately 2–3 miles of parcel)
Coral Canyon Development (SITLA)	2,600-acre master planned community; some development has already occurred. SITLA is responsible for any future development.	2,247	7A–C (within approximately 1–2 miles of parcel)

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
Green Springs Development (SITLA)	1,140-acre parcel; utility, land use, and traffic planning in progress. Includes residential and medical communities.	1,124	3E (within approximately 1–3 miles of parcel)
U.S. Highway (US) 191; passing lanes milepost (MP) 26 to 157	Utah Department of Transportation (UDOT) roadwork; no details available.	737	32 (intersects parcel)
US-40; widen westbound from MP 5.7 to MP 12.3	UDOT roadwork; no details available.	78	15 (intersects parcel) 17 (within 1 mile of parcel)
US-89; Passing lanes between Page and Kanab	UDOT roadwork; no details available.	384	33 (intersects parcel)
US-6; substation to Interstate 70	UDOT roadwork; no details available.	208	29 (within 1 mile of parcel)
Interstate 70; MP 141.24 Joint to MP 147	UDOT roadwork; no details available.	69	SE216C (intersects parcel) SE199, SE200, SE216A, SE216B, SE217 (within 1 mile of parcel)
Interstate 70; MP 154.8 to Green River Structure	UDOT roadwork; under design but no details available.	76	28, 30 (within 1 mile of parcel)
Interstate 15 Wildlife Fencing	Installation of chain link, field fence or wildlife fence alongside interstate segment in 2024.	Not available	7A (within 1 mile of parcel)
Advanced Clean Energy Storage Project	Proposed hydrogen and energy storage facility.	1,249	51M, 52M (within 1 mile of parcel)

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
Cross-Tie 500-kilovolt Transmission Project (DOI-BLM-UT-W020-2022-0007-EIS)	Proposed 214-mile transmission line that would connect the Clover Substation in central Utah with the Robinson Summit Substation in east-central Nevada. EIS in preparation.	103,744	8, 10, 12 (intersects parcel) 9, 11, 42, 52M (within 1 mile of parcel)
Rodatherm Energy Geothermal Test Bed (DOI-BLM-UT-C010-2023-0008-EA)[9]	This is a proposed commercial pilot project that would determine if an advanced geothermal generation facility is commercially viable at this location. The proposed project would include developing two well pads, drilling and testing two closed looped geothermal wells, and access road construction. The Rodatherm Energy geothermal system is a fully isolated Organic Rankine Cycle system that converts an underground heat source into mechanical energy that would be used to generate electrical power. The two closed looped geothermal wells would produce approximately 2 MW of power or 1 MW per well. Rodatherm Energy expects to drill and test up to five total geothermal wells (two input wells, two output wells, and one turnaround well) from the two proposed well pads. The BLM signed the decision for this project on September 11, 2023.	17	9 (within 2 miles of parcel)
Sawtooth Pipeline Project (DOI-BLM-UT-W020-2019-0002-EA)	Project would construct pipeline and power line to run refined petroleum products from new storage tank within existing Intermountain Power Project railroad load-out facility to UNEV pipeline.	18	51M, 52M (within 1 mile of parcel)
UTU-95861 PacifiCorp ROW Disappearing Angel Substation (DOI-BLM-UT-Y010-2022-0060-EA)	The PacifiCorp proposal is for a 30-year ROW for a 69-kilovolt electric utility substation to maintain efficient, reliable, and safe electrical service for customers primarily in the Castle Valley area. The 270 × 200–foot substation would include a capacitor bank, concrete slabs, control equipment, associated facilities, and a perimeter fence. The substation footprint would be graveled. Subsurface structures would include pier foundations, communication cable trays, and copper wire grid.	3	32 (intersects parcel)

[9] This project was in development during the preparation of this EA and was authorized by the BLM very shortly before finalization of the EA. Therefore, it is still considered as part of the cumulative scenario for the land exchange.

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
John Wesley Powell NCA Day Use Area (DOI-BLM-UT-G010-2023-0025-EA)	The BLM would construct one 12 × 12–foot shade structure along Jones Hole Road near the John Wesley Powell NCA boundary. EA in preparation.	<1	SE104 (intersects parcel)
Expanding Opportunities for Single Track Mountain Bike Recreation Through Sustainable Trails Development at Little Cedar Mountain (DOI-BLM-UT-G020-2022-0023-EA)	The BLM is proposing to authorize the construction and maintenance of up to 35 miles of new, bicycle-optimized, single-track trails within the Little Cedar Mountain area located in Emery County in Section 4, T19S, R10E.	11	SE161 (within 1 mile of parcel)
Goblin Valley Distribution and Telecommunication Lines (DOI-BLM-UT-G020-2022-0019-EA)	The BLM is proposing to issue a ROW for the Utah Division of Facilities Construction and Management to construct and operate the Goblin Valley Power Line on approximately 13 miles of BLM-administered land. The Goblin Valley Power Line would be aboveground and would consist of two segments: Segment 1 would run parallel to Highway 24 from the Hanksville Airport on the east side of the highway to the junction with Molly's Castle Road, and Segment 2 would run northwest on the north side of Molly's Castle Road to Goblin Valley State Park. In addition to the power line, Emery Telcom would use the same ROW as Segment 2 to install new telecommunication facilities and appurtenances to provide updated services, increased bandwidth, and high-speed internet to Goblin Valley State Park. The permanent ROW would be 40 feet wide for both segments. Segment 1 would require two overhead crossings of Highway 24 and would be routed to the east of Kathline Rock.	100,875	SE276, SE289, SE290, SE291A–B, SE292A–B (intersects parcel), SE273, SE288A–B (within 1 mile of parcel)

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
North American Helium (NAH) Helium Wells (DOI-BLM-UT-G020-2021-0017-EA)[10]	NAH submitted three applications for permits to drill (APD) and two road and pipeline ROWs to the BLM for processing in August 2019. The three proposed gas wells, from which helium is expected to be a product, are located on federal oil and gas leases acquired by NAH in September 2018. One of the APDs also identifies a central processing facility to process extracted helium from the proposed wells. This processing facility would be located entirely on the well pad for one of the wells. The two ROWs would accommodate flowlines and travel routes associated with the proposed wells. The BLM signed the decision and issued the APDs and ROWs on September 20, 2023. Additionally, it is important to note that the underlying federal oil and gas leases for this project were challenged in federal district court (*SUWA v. Haaland*, Case No. 1:20-cv-03654). The parties negotiated a settlement resolving the above lawsuit in which the BLM agreed to conduct additional NEPA analysis for the leasing decision that supported the challenged leases (see DOI-BLM-UT-0000-2023-0007-EA). The BLM is currently considering whether to affirm or cancel these leases, including the federal leases at issue for this project.	23	54 (intersects parcel)
San Rafael Desert Travel Management Plan (DOI-BLM-UT-G020-2018-0004-EA)	Travel management plan for existing roads. Plan is currently in effect.	1,929	30, 54 (intersects parcel)
BLM active oil and gas development and production operations	Active Utah BLM oil and gas leases.	10,153	2, 23–25, 27, 53, 53M, 53OG, 54 (intersects parcels)

[10] This project was in development during the preparation of this EA and was authorized by the BLM very shortly before finalization of the EA. Therefore, it is still considered as part of the cumulative scenario for the land exchange.

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
Twin Bridges Bowknot Helium (DOI-BLM-UT-G020-2020-0033-EA)	Proposed ROW for 1) road improvements to Spur Road 1025 from Emery County Road 1025 to the proposed well pad; 2) for a ROW to construct an off-lease well pad; 3) for underground authorizations required to access the federal and SITLA mineral leases pursuant to 43 CFR Subpart 2920; 4) to approve Twin Bridges' APD for the 5-2 well; and 5) for issuance of three ROWs for pipelines (one 14-inch gathering pipeline, one 8-inch produced water pipeline, and one 8-inch fluids transfer pipeline) and one ROW for running power and communication infrastructure that would run from the well pad location to the proposed processing plant. Up to five additional development wells may be drilled from the proposed well pad. Although the BLM issued a decision for this project on December 23, 2020, Twin Bridges has since withdrawn the federal APD authorized by this decision. Additionally, it is important to note that the underlying federal oil and gas lease for this project was challenged in federal district court (*SUWA v. Haaland*, Case No. 1:20-cv-03654). The parties negotiated a settlement resolving the above lawsuit in which the BLM agreed to conduct additional NEPA analysis for the leasing decision that supported the challenged leases (see DOI-BLM-UT-0000-2023-0007-EA). The BLM is currently considering whether to affirm or cancel these leases, including the federal lease at issue for this project.	43	54 (estimated approximately 14 miles from parcel)
Lila Canyon Mine Lease Modifications (DOI-BLM-UT-G020-2018-0039-EA)	The BLM would offer the Lila Canyon modification areas for lease, subject to standard and special lease stipulations developed for the tracts. The BLM estimates that there are approximately 9.1 million tons of salable coal in these two areas, which are projected to extend the life of the Lila Canyon Mine by approximately 3 years. Under the Proposed Action, all coal would be mined using underground methods from the existing Lila Canyon Mine. The applicant would develop these coal reserves by adding, or extending, up to five longwall panels to its mining plan. Status of the project is in process, but not approved.	1,273	46, 46C (within 1 mile of parcels)
Equestrian trailhead	Proposed equestrian trailhead at Fivemile Pass Recreation Area.	1	34 (within 1 mile of parcel)
Canyonlands Herd Management Area (HMA) Gather Plan (DOI-BLM-UT-C020-2022-0017-EA)	The BLM is the owner/proponent of the Canyonlands Herd Management Area (HMA) burro gather plan. The Canyonlands HMA covers 89,392 acres in eastern Wayne County, Utah, adjacent to Glen Canyon National Recreation Area and the Horseshoe Canyon unit of Canyonlands National Park. The EA proposes to gather and remove excess wild burros and conduct fertility control management over a 10-year period from the date of the first gather. Status of the project is in process, but not approved.	89,392	SE158B, SE160B (intersects parcels)

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
McCoy Flats Campground (DOI-BLM-UT-G010-2023-0045-EA)	The BLM is proposing to construct a campground with up to 15 individual sites, nine long vehicle sites, and two group sites (1.1 acres of disturbance). Most of these sites would be established on locations previously disturbed by the existing dispersed camping. Proposed facilities would include shade structures and campfire rings at each site, two single-vault toilets, multiple interpretive kiosks with maps and other information, and a fee tube. All buildings could be equipped with anti-perch devices to reduce the creation of perch locations for birds. The BLM would erect a fence around the campground to keep animals out of the sites and parking barricades to delineate site parking boundaries and prevent unauthorized site expansion. The existing road entering the proposed campground location would be improved and expanded. New roads would also be constructed to provide access to the proposed campsites. An overflow parking lot and day use area with 10 to 12 parking stalls that would accommodate trailers would also be constructed (0.2 acre of disturbance). Vegetation would be regularly cleared around all proposed facilities and surrounding areas. The project would be completed within 10 years of approval, as funds are available. Status of the project is in process, but not approved.	1.5	SE111 (within 1 mile of parcel)
BLM Reasonably Foreseeable Development for Oil and Gas, Mineral Potential Reports, and 2012 *Greater Uinta Basin Oil and Gas Cumulative Impacts Technical Support Document*	Mineral potential reports and estimates of future oil and gas development are provided as part of current BLM RMPs. Specific estimates of surface disturbance (pad size/per well estimate) for oil and gas in the VFO and upper part of Carbon County (encompassing 5,853,000 acres) were also developed in the 2012 *Greater Uinta Basin Oil and Gas Cumulative Impacts Technical Support Document* (BLM 2012c). These documents indicate that future disturbance on state and federal lands to support these development activities is likely.	See information at left.	Applies generally to all parcels within Vernal and Price RMP boundaries

Action or Trend	Status or Description	Estimated Total Acres*	Closest BLM or SITLA Parcel(s) and Distance
BLM RMP amendments (see generally DOI-BLM-UT-G000-2019-0002-OTHER_NEPA)	The following RMP amendments are in progress and could result in management changes that would alter future land use on the following lands: • San Rafael Swell Recreation Area (Price FO) (DOI-BLM-UT-G020-2021-0014-RMP-EA): Would update the RMP's decisions to specify that the 217,000-acre recreation area has been withdrawn from public land laws, mining laws, and other mineral and geothermal laws; and to remove the wilderness study area decisions. • Green River Wild, Scenic, and Recreational River (Price FO) (DOI-BLM-UT-G020-2021-0044-RMP-EA): Would update the RMP's decisions to specify that the 63-mile wild segment would be withdrawn from mineral laws, restricted with regard to road construction, avoided for ROWs, withdrawn from public land laws, open to domestic livestock grazing and livestock facilities so long as they do not conflict with the river values and maintain the area's primitive character, and excluded from cutting or eradication of trees and other vegetation except 1) when needed for a primitive recreation experience, such as to clear trails; 2) to protect users or the environment, including the use of wildfire suppression; or 3) when the vegetation is an invasive species. The scenic and recreation sections would be avoided for ROWs, withdrawn from public land laws, and open to domestic livestock grazing and livestock facilities so long as they do not conflict with the river values and maintain the area's scenic character. • Jurassic National Monument (Price FO) (DOI-BLM-UT-G020-2021-0045-RMP-EA) and John Wesley Powell NCA (Vernal FO) (DOI-BLM-UT-G010-2021-0096-RMP-EA): Would update the RMPs' decisions to specify that the 850-acre monument and 29,868-acre NCA, respectively, have been withdrawn from public land laws, mining laws, mineral leasing, and geothermal leasing laws, and that livestock grazing shall be allowed to continue, subject to such reasonable regulations, policies, and practices as the BLM considers to be necessary in accordance with applicable law (including regulations), the purposes for which the monument and NCA were established, and Appendix A of the report of the Committee on Interior and Insular Affairs of the House of Representatives accompanying H.R. 2570 of the 101st Congress (House Report 101-405). • Desolation, Turtle, and Labyrinth Canyons Released Wilderness Study Areas (Price FO) (DOI-BLM-UT-G020-2021-0043-RMP-EA): Would update the RMP's decisions to specify that the released wilderness study areas (6,600 acres in total) are no longer subject to wilderness study area decisions. • McCoy Flats Trail System (Vernal FO) (DOI-BLM-UT-G010-2021-0095-RMP-EA): Would update the RMP's decisions to recognize the Dingell Act's designation of the trail system.	See information at left.	Applies generally to all parcels within the Price or Vernal RMP boundaries (as denoted by field office to the left)

* All acreage is based on public data sources ranging from GIS shapefiles to general project descriptions. Given this, the estimates presented in this EA represent the BLM's best effort to quantify cumulative project footprints but may vary from other reported sources. These estimates represent the complete footprint, which often extends beyond BLM, SITLA, and equalization parcel boundaries.

3.2 Air Quality

Air quality status within a region is measured in comparison to the National Ambient Air Quality Standards (NAAQS), which are standards established by the U.S. Environmental Protection Agency (EPA) pursuant to the CAA (42 USC 7409) for criteria pollutants to protect human health and welfare (primary standards) and provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (secondary standards).

For the purpose of this analysis, the existing air quality conditions for each county containing tracts within the land exchange were evaluated. These counties comprise Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne in Utah; hereafter referred to as the *air quality analysis area*. The cumulative impact analysis area for air quality consists of a near-field analysis area at 31 miles from the land exchange centroid and a far-field analysis area out to 186 miles. This cumulative impact analysis area captures the extent to which other past, present, and other reasonably foreseeable projects could contribute to cumulative impacts to air quality in combination with the land exchange.

Emissions of criteria air pollutants would also occur outside the air quality analysis area from transport, processing, distribution, and end use. Because there are potentially tens to hundreds of thousands of mid-stream and downstream emissions sources, the BLM is not able to quantify air quality and health impacts from these sources. Generally, crude oil from the well fields in the Uinta Basin is trucked to the Price River Terminal in Wellington, Utah, for shipment to refineries, or is trucked directly to refineries in Salt Lake City, Utah. If constructed, trains on the proposed Uinta Basin Railway rail line would transport crude oil produced in the Uinta Basin to markets across the United States (Surface Transportation Board 2021). Utah's refineries produce mostly motor gasoline, diesel fuel, and jet fuel. Pipelines carry refined products from Salt Lake City's refineries to markets in Utah, Idaho, Nevada, Wyoming, eastern Washington, and Oregon (U.S. Energy Information Administration [EIA] 2022). Regarding natural gas, Utah is crossed by several interstate pipelines that transport natural gas from the Opal Hub in Wyoming, from the Piceance Basin in western Colorado, and from Utah's in-state production to markets in Nevada, Idaho, and Colorado (EIA 2022). Downstream combustion, whether in stationary facilities or motor vehicles and airplanes, is regulated by the EPA, other federal agencies, or delegated state agencies. This regulatory process is designed to avoid downstream impacts to regional and local air quality.

3.2.1 Affected Environment

3.2.1.1 Parcel-Specific Conditions

The EPA office of Air Quality Planning and Standards sets the NAAQS for the following criteria pollutants: nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter 10 microns and smaller (PM_{10}), particulate matter 2.5 microns and smaller ($PM_{2.5}$), ozone (O_3), and lead (Table 3.2-1). Under the provisions of the CAA, any state can maintain requirements that are more stringent than the national program. The State of Utah has adopted and legally enforces the NAAQS (Utah Division of Air Quality [UDAQ] 2022).

On January 6, 2023, the EPA announced a proposal to strengthen the $PM_{2.5}$ standard to better protect human health and the environment. The EPA accepted public comments on the proposal

to reduce the current standard from 12 micrograms per cubic meter ($\mu g/m^3$) to a level between 8 and 11 $\mu g/m^3$, to reflect the latest health data and scientific evidence to better protect communities. The EPA is currently considering public comments received.

The EPA assigns classifications to geographic areas based on monitored ambient air quality conditions. Ambient air is defined in 40 CFR 50.1(e) as "that portion of the atmosphere, external to buildings, to which the general public has access." Areas that meet both National Primary and Secondary Standards are classified as being in attainment of the NAAQS. Areas that do not meet NAAQS for a certain pollutant are classified as being in nonattainment of that pollutant. Areas that cannot be classified due to a lack of available information are designated as unclassified. As of September 30, 2022, Tooele County (including BLM parcel 34) is in nonattainment for $PM_{2.5}$, SO_2, and 8-hour O_3. Uintah County (including BLM parcels 53, 53M, and 53OG and SITLA parcels SE107, SE108, SE109, SE110, and SE111) is in nonattainment for 8-hour O_3 (also referred to as the Uinta Basin Ozone Nonattainment Area [Marginal]). The current 2020 to 2022 design values are below the NAAQS for Uintah County, and the high ozone levels seen during the winter of 2022–2023 will likely cause a bump in the next design value, which would then be over the NAAQS. This could then lead the EPA to change this status from marginal to moderate or serious. Utah County (including BLM parcels 6 and 36) is in nonattainment for $PM_{2.5}$ and 8-hour O_3. Additionally, Utah County is in maintenance status for PM_{10}, therefore general conformity rules would apply for 10 years after attainment is reached. The remaining counties within the air quality analysis area are either classified as in attainment or unclassified (EPA 2022a).

Table 3.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	National Primary Standards	National Secondary Standards
CO	1 hour* 8 hours*	35 parts per million (ppm) 9 ppm	– –
Lead	Rolling 3-month average†	0.15 $\mu g/m^3$	Same as Primary
NO_2	1 hour Annual	0.100 ppm‡ 0.053 ppm§	– Same as Primary
O_3	8 hours¶	0.07 ppm	Same as Primary
PM_{10}	24 hours	150 $\mu g/m^3$# –	Same as Primary –
$PM_{2.5}$	24 hours** Annual††	35 $\mu g/m^3$ 12 $\mu g/m^3$	Same as Primary 15 $\mu g/m^3$
SO_2	1 hour 3 hours*	0.075 ppm‡‡ –	– 0.5 ppm

Source: EPA (2022b).

* Not to be exceeded more than once per year.

† Not to be exceeded.

‡ The 3-year average of the 98th percentile of the 1-hour daily maximum concentration must not exceed this standard.

§ Annual mean.

¶ The 3-year average of the 4th highest daily maximum 8-hour average O_3 concentration measured at each monitor within an area over each year must not exceed this standard.

Not to be exceeded more than once per year on average over 3 years.

** The 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed this standard.

†† The 3-year average of the annual arithmetic mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed this standard.

‡‡ The 3-year average of the annual 99th percentile of the 1-hour daily maximum must not exceed this standard.

Air pollutant concentrations are reported using design values. A design value is a statistic that describes the air quality status of a given location relative to the level of the NAAQS. Design values are used to designate and classify nonattainment areas, as well as to assess progress toward meeting the NAAQS. Design values that are representative for where parcels are located are provided in Table 3.2-2. Generally, counties without reported design values have good air quality and pollutant concentrations are below the NAAQS. The main pollutants of concern within the analysis area are O_3 and $PM_{2.5}$ as these are the pollutants with reported design values near or above the NAAQS.

Table 3.2-2. Criteria Pollutant Design Values in Uintah and Utah Counties, Utah (2018–2020)

Pollutant	County	Averaging Time	Design Concentration*	NAAQS
NO_2	Uintah	1-hour Annual	29 parts per billion (ppb) 4 ppb	100 ppb 53 ppb
NO_2	Utah	1-hour Annual	42 ppb 10 ppb	100 ppb 53 ppb
$PM_{2.5}$	Uintah	24-hour Annual	22 µg/m3 6.3 µg/m3	35 µg/m^3 12.0 µg/m^3
PM2.5	Utah	24-hour Annual	26 µg/m^3 7.2 µg/m^3	35 µg/m^3 12.0 µg/m^3
O_3	Uintah	8-hour	0.078 parts per million (ppm)	0.070 ppm
O_3	Utah	8-hour	0.07 ppm	0.070 ppm

Sources: BLM (2022j). EPA (2023a).

3.2.1.1.1 Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are known or suspected to cause cancer or other serious health effects, or adverse environmental effects, and are also regulated by the EPA. Examples of listed HAPs emitted by the oil and gas industry include benzene, toluene, ethyl benzene, mixed xylenes, formaldehyde, normal hexane, acetaldehyde, and methanol. A list of HAP point source emissions by county is published by the UDAQ.

The EPA National Toxics Assessment tool is used to evaluate impacts from existing HAP emissions in Utah. The EPA has determined that, for Utah counties with BLM-administered lands, the total cancer risk is 10.3 to 19.1 in 1 million, incorporated by reference from Section 3.1 of the Utah BLM Air Resource Management Strategy 2022 Monitoring Report (AMR) (BLM 2022j). This cancer risk is within the acceptable range of risk published by the EPA of 100 in 1 million as discussed in the National Contingency Plan, 40 CFR Part 300. The noncancer respiratory hazard index for Utah counties with BLM-administered lands is between 0.11 and 0.67. Hazard index values less than one mean it is unlikely that air toxics would cause adverse noncancer health effects over a lifetime of exposure.

3.2.1.1.2 Emission Trends

The National Emissions Inventory provides an annual estimate of criteria pollutants, HAPs, and greenhouse gas (GHG) emissions. Emission inventories provide detailed emissions totals by county, as well as by emission type, which can be used to determine which industries and activities are contributing to the general level of pollution in an area. A summary of emissions in

the analysis area from the most recent 2017 National Emissions Inventory (EPA 2022c) is provided in Table 3.2-3.

CO is the largest contributor of pollutants in Iron, Sevier, Summit, Tooele, Utah, Wasatch, and Washington Counties. Nitrogen oxides (NO_x) are the largest contributor in Emery County, and volatile organic compounds (VOCs) are the largest contributor in Beaver, Carbon, Grand, Juab, Kane, Millard, Rich, San Juan, Uintah, and Wayne Counties.

Primary sources of CO, NO_x, and sulfur oxides (SO_x) consist of highway vehicles and natural resources (biogenic emissions that come from natural sources, including vegetation and soils); however, in Uintah County the largest contributor of CO, NO_x, and SO_x is petroleum and related industries; petroleum and related industries are also the largest contributor of VOCs in Uintah County. The Hunter and Huntington coal-fired power plants are the largest emissions sources for Emery County. For all other counties (excluding Uintah and Emery), natural resources are the largest contributor of VOCs. The largest contributors of GHG emissions (carbon dioxide equivalent [CO_2e]) in the air quality analysis area consist of the Hunter and Huntington coal-fired power plants, light- and heavy-duty vehicles, industrial processes, and fires (both wild and prescribed).

Table 3.2-3. Emissions for the Air Quality Analysis Area in Tons Per Year

County	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	VOCs	HAPs	CO_2e
Beaver	5,223	2,410	7.00	2,733	444	10,271	1,974	257,485
Carbon	4,820	3,010	484	4,576	654	6,810	1,232	843,741
Emery	14,685	18,117	5,797	7,336	1,504	14,837	3,340	15,171,530
Grand	7,799	3,434	6.00	4,032	540	14,021	3,180	373,457
Iron	245,606	6,304	1,547	27,795	20,432.1	70,336	15,031	3,343,470
Juab	7,240	2,872	11.00	2,533	424	10,092	2,502	913,331
Kane	6,295	1,437	4.00	3,985	545	16,892	3,530	141,698
Millard	18,353	15,288	2,535	7,825	2,261	21,198	4,986	10,739,216
Rich	2,061	634	1.00	1,750	295	2,145	568	41,986
San Juan	11,586	2,876	16.0	7,924	1,104	30,809	6,501	263,802
Sevier	7,630	1,983	35.0	5,312	929	7,274	1,297	352,978
Summit	11,833	3,508	166	3,902	838	7,986	1,217	705,763
Tooele	26,183	6,080	193	7,214	2,554	19,534	11,714	904,288
Uintah	13,624	9,653	36.0	7,009	1,272	66,310	6,831	356,639
Utah	71,310	11,290	319	17,323	4,856	22,333	4,8987	5,568,167
Wasatch	5,290	1,433	11.00	4,065	577	4,433	802	313,790
Washington	22,920	4,554	28	7,444	1,169	17,222	3,280	1,587,168
Wayne	2,984	843	3.00	1,293	192	9,125	1,944	36,891

Source: EPA (2022c).

3.2.1.1.3 Air Quality–Related Values

The Prevention of Significant Deterioration (PSD) regulations are developed and implemented to protect public health and welfare and to preserve, protect, and enhance the air quality in national

parks, wilderness areas, monuments, and other areas of special value. The assessment applies to permitting for new or modified major[11] stationary sources in attainment areas. As part of the PSD, EPA classifies airsheds as Class I or Class II. Class I areas are areas of special national or regional natural, scenic, recreational, or historic value for which the PSD regulations provide special protection. All other areas are designated Class II areas, which allow for moderate pollution increases and reasonable growth, while still applying stringent air quality constraints (National Park Service [NPS] 2020).

Within the state of Utah there are five Class I areas: Arches National Park, Bryce Canyon National Park, Canyonlands National Park, Capitol Reef National Park, and Zion National Park. For Class I areas, parcel 33 is approximately 31 miles from the Bryce Canyon National Park. The closest parcel to Zion National Park is parcel 13 located approximately 25 miles away. The closest parcels to Capitol Reef National Park are SE293A–B and SE296A–B, and they are 1 and 2 miles away, respectively. Parcels SE160B and SE158A are 4 and 5 miles away, respectively, from Canyonlands National Park. Parcel 32 is within 13 and 15 miles of Arches National Park and Canyonlands National Park, respectively (EPA 2022e).

The Utah BLM AMR (BLM 2022j) discusses past, present, and foreseeable emissions and air quality data for counties in Utah. Visual range for Class I areas in Utah varies from 153 to 177 miles depending on time of year and location. Visibility trends based on air monitoring data from four Utah monitoring sites for the clearest, haziest, and most impaired categories are incorporated by reference from the AMR (Section 3.3.1 of the AMR and Figures 3 through 6 of the AMR). The difference between the haziest and most impaired days at Bryce Canyon has increased, indicating episodic events have a greater impact to visibility. The haziest days at Bryce Canyon have shown little improvement due to many years of large wildfire smoke episodes. Progress toward Regional Haze Rule goals is demonstrated by the marked improvement on the most impaired days at Bryce Canyon—those with high amounts of pollutants emitted by humans—over the same time frame. Visibility in all three categories (clearest, haziest, and most impaired) at Canyonlands and Capitol Reef National Parks improved over the respective period of record at each location.

Past and present actions that have affected and would likely continue to affect air quality in the analysis area include surface disturbance resulting from oil and gas development and associated infrastructure, geophysical exploration, ranching and livestock grazing, range improvements, recreation (including off-highway vehicle [OHV] use), authorization of ROWs for utilities and other uses, and road development. Additional past and present actions that have affected and would likely continue to affect air quality include the continued development of energy sources such as oil, gas, and coal; the development of highways and railways; and the development of various industries that emit pollutants. These types of actions and activities can reduce air quality through emissions of criteria pollutants (including fugitive dust), VOCs, and HAPs, as well as contribute to deposition impacts and to a reduction in visibility.

3.2.1.2 Management Framework

The EPA has delegated authority to the Utah Department of Environmental Quality (UDEQ) for regulating air quality in all areas of Utah, with the exception of Tribal Lands, which remain

[11] Major sources are defined as a source that emits 100 tons per year or more of any criteria pollutant for pollutants specifically listed source categories in 40 CFR 51.166(b)(a)(i)(a) or that emit 250 tons per year of any criteria pollutants and are not specifically listed sources.

under the authority of the EPA. Air quality is managed in conformance with the CAA. Parcels could also be subject to control measures required by the State of Utah to minimize fugitive dust during construction (Utah Administrative Code [UAC] 307-205-5).

Established under the CAA Section 176(c)(4), the General Conformity rule plays an important role in helping states and Tribes to improve air quality in those areas that do not meet the NAAQS. Under the General Conformity rule, federal agencies must work with state, Tribal, and local governments in a nonattainment or maintenance areas to ensure that federal actions conform to the air quality plans established or demonstrate that emissions are de minimis in the applicable state or Tribal implementation plan. However, the requirement to perform a full conformity determination is not applicable for the land exchange.

Under 40 CFR 93.153(c)(2), a conformity determination is not required for actions "which would result in no emissions increase or an increase in emissions that is clearly de minimis," such as the "Transfers of ownership, interests, and titles in land (40 CFR 93.153(c)(2)(xiv))." Land transfers do not authorize emissions generating activities on the subject parcels, and therefore does not directly result in an emissions increase.

A conformity determination also is not required "where the emissions (direct or indirect) are not reasonably foreseeable" (40 CFR 93.153(c)(3)). As defined in the CAA, "Reasonably foreseeable emissions are projected future direct and indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency" (40 CFR 93.152). Although this EA provides historical emissions information for identified potential uses of the parcels for purposes of NEPA indirect and cumulative impacts analysis, the BLM does not have a proposed development or specific information about the future development of the specific parcels under consideration (including emissions producing equipment and control devices), such that a more precise emissions inventory could be reasonably estimated and compared to the thresholds provided in 40 CFR 93.153(b). At this time, there is no proposed development that would generate emissions, and while the location of potential emissions is generally known, the emissions cannot be quantified because there is no plan of development outlining emission sources and technology that would be used.

3.2.2 Proposed Action

The proposed land exchange would not directly cause impacts to air quality; however, the effect that potential future land use changes would have after conveyance, in relation to conformance with NAAQS, was assessed for BLM and SITLA parcels with current or potential future land use of oil and gas production or mining production. For parcels with potential future oil and gas leases, a reasonable quantification of emissions was estimated with the BLM's lease sale emissions tool (version 2022.c). The tool estimates criteria air pollutants and GHG emissions from well development, production operations (including production decline), mid-stream, and downstream activities. The BLM's lease sale emissions tool was populated with BLM VFO oil and gas development data for the last 6 months of 2022 to estimate conservative lease development emissions for specified parcel(s). Emissions were calculated for all parcels and acreage with similar potential future uses, assuming a 30-year production life for the parcels.

The BLM's lease sale emissions tool was also used to calculate criteria air pollutant and HAP emissions for parcels included in the air quality analysis area that 1) were in counties that had

one or more pollutants in nonattainment and 2) had a potential future use that included oil and gas production.

For parcels with existing and potential future mining production, a reasonable quantification of the emissions was obtained from the Williams Draw Lease by Application EA (BLM 2020a). Direct emissions would result from the mining of the coal in the lease by application area and the hauling of the mined coal to the existing Savage Coal Terminal (SCT). Indirect emissions would result from handling the mined coal at the SCT; hauling the coal from the SCT to a regional coal-fired power plant via haul trucks, or to a generic U.S. port located along the Gulf of Mexico via locomotive for export; and combusting coal. These emissions would include criteria air pollutants, HAPs, and GHGs.

Estimated emissions from the Williams Draw lease area are not new emissions; rather, they are a continuation of existing emissions from the Lila Canyon coal mine and the Hunter and Huntington coal-fired power plants, and they include emissions associated with coal mining, coal hauling and handling, and coal combustion. A substantial portion of the coal hauling and combustion emissions occur outside the air quality analysis area but are included in the emissions estimates due to potential health impacts. Health effects are incorporated by reference from the AMR (BLM 2022j). These health effects include respiratory issues (asthma, lung damage, reduced oxygen delivery to the body, difficulty breathing), cardiovascular and nervous system issues, reproductive issues, and the risk of cancer or other serious health effects. People most at risk include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. These pollutants can also affect human safety and the environment by reducing visibility and causing damage to plants and ecosystems.

The results of this analysis, which includes potential emissions for oil and gas lease development from both SITLA and BLM lands as part of the land exchange, are provided in Table 3.2-4. Substantial air resource impacts are not anticipated from the development of the lease parcels based on the emissions estimates contained in Table 3.2-4, air quality analysis for similar oil and gas development in the area, and considering the location of parcels relative to population centers and Class I areas. None of the potential future emissions on parcels within the Uinta Basin Ozone Nonattainment Area [Marginal] would exceed de minimis thresholds[12] for NO_x and VOC, indicating that a full general conformity determination may not be needed in the future when applications for permits to drill are submitted.

Previous air quality modeling of emissions from mining, coal handling, and coal hauling inside the air quality analysis area showed potential localized exceedances of NO_x and $PM_{2.5}$ air quality standards on leased area near mine vents and dirt haul roads. Because these exceedances occurred on leased areas, limiting public access (i.e. not ambient air) to the emissions sources would prevent adverse impacts to human health and safety (BLM 2020a). As mentioned in Section 3.2.1.1, Carbon and Emery Counties currently meet all ambient air quality standards; all current emissions are part of the existing environment and would not further alter air quality. Therefore, the Proposed Action, based on the estimated emissions from current and potential land use, would result in no appreciable impacts to air quality.

[12] 40 CFR 93.153 defines the de minimis thresholds for NO_x and VOC in a marginal O_3 nonattainment area as 100 tons per year.

Table 3.2-4. Average Year Criteria and HAP Emissions from the Development of Lease Parcels in Tons Per Year

Parcels	County	Acreage	PM_{10}	$PM_{2.5}$	VOC	NO_x	CO	SO_2	HAPs
SE107, 108, 109, 110, 111*	Uintah	1,363.62	1.80	0.90	33	9.00	14	0.01	3.70
53, 53OG*	Uintah	1,805.00	2.50	1.30	45	12	19	0.01	5.05
53M*	Uintah	395.00	0.80	0.40	14	4.00	6.10	0.00	1.66
SE156, SE157A*	Emery	1,206.13	1.80	0.90	33	9.00	14	0.01	3.70
SE157B, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, SE297B*	Wayne	856.02	1.20	0.60	22	5.90	8.90	0.00	2.42
54*	Emery	4,480.00	5.10	2.70	94	26	39	0.01	11
23, 24, 25*	Emery	2,357.37	2.80	1.50	51	14	21	0.01	5.77
27*	Emery	119.29	0.40	0.20	8.10	2.20	3.40	0.00	0.91
46, 46C, 47, 48†	Emery	5,113	153	90	139	3,359	952	3.53	2.15

* Emissions from oil and gas production.

† Data from SWCA (2019).

Additionally, regulatory agencies would also require various mitigation measures for oil and gas well permits, which could reduce air emissions. Coal combustion facilities are subject to local, state, and federal air quality regulations and emissions restrictions required in air quality permits, which are intended to prevent adverse impacts. Any future activities on lands to be conveyed to SITLA would be subject to air quality regulation by the UDAQ. State air quality permit rule requirements are also identified in UAC R307-504-511.

3.2.3 No Action

Under the No Action, the land exchange would not occur, and if the federal coal leasing moratorium is lifted, the parcels would still have the same development potential and interest under their respective original agencies; therefore, the criteria and HAPs emission estimates in Table 3.2-4 would also apply to the No Action. For example, the parcels that collectively make up the Williams Draw would continue with their present development and emissions regardless of the land exchange outcome (that is, the high-development scenario). Therefore, emissions from criteria air pollutants and HAPs under the No Action would be the same as the Proposed Action, with exceptions for regulation and management differences. For example, the BLM has a statutory mandate to "use all reasonable precautions to prevent waste of oil and gas" (30 USC 225). Because the state does not have a similar mandate, it is likely that upstream oil and gas emissions would be slightly higher for parcels that are under the jurisdiction of the state. Additionally, uncertainty remains regarding future development, in that the parcels could be developed differently than expected or not at all; therefore, perfect substitution of development between the two agencies would not occur.

A low-development scenario was considered wherein the federal coal leasing moratorium would result in the Lila Canyon Mine being reclaimed, resulting in a reduction of emissions from

reduced coal mining development. The Hunter and Huntington coal-fired power plants have 2,272 megawatts (MW) of capacity, which is 24% of the total generation capacity in the State of Utah (9,438 MW). In 2021, these plants generated 15,513 gigawatts, which is 37% of the total power generated in the state of Utah (42,113 gigawatts) (Mills et al. 2022). Although these plants do not rely solely on coal mined from the Lila Canyon Mine, the mine is an important energy source to these local power generators. Emery County Coal Resources, Inc's (ECCR) contracts with Wolverine Fuels to haul the coal it produces directly to the Hunter and Huntington coal-fired power plants. ECCR has informed the BLM that if the Lila Canyon Mine stopped producing coal, these plants would see a 20% reduction of coal used for fuel generation and that these plants would not be able to readily replace this coal from the domestic market (BLM 2022).

Insufficient information exists to know what potential sources of energy would be used for the substitution of the 20% loss of coal to the Hunter and Huntington coal-fired power plants in the short term. However, natural gas or renewable energy sources are the primary alternative forms of electricity generation and are strong substitutes for coal in energy generation. This substitution of coal for renewable energy sources would result in a short-term increase in particulate matter from the land disturbance associated with construction, but would result in an overall decrease in emissions from criteria air pollutants because VOCs and HAPs as renewable energy options emit little to no air pollutants when compared to fossil-fuel combustion (United Nations 2023). The substitution from coal to natural gas would also result in a reduction of criteria air pollutants because VOCs and HAPs as natural gas combustion generally result in fewer emissions than coal combustion (EIA 2022). For example, coal produces greater than 90 times the sulfur dioxide and five times the nitrogen oxides per unit of electricity (U.S. Government Accountability Office 2012).

In the long term, the Hunter and Huntington coal-fired power plants intend to close by 2032 and are looking for possible locations for future nuclear-powered stations (Higgins 2023). Replacing coal with nuclear power would result in the long-term reduction in air pollutants because nuclear power is a zero-emission form of energy (Nuclear Energy Institute 2023).

3.2.4 Cumulative Impacts

Ongoing and reasonably foreseeable oil and gas leases, mining, and exploration, as well as other activities, such as road maintenance, would further degrade air quality in ways similar to mining activities conducted on the exchanged land. In 2020, the Bingham Research Center at Utah State University assisted the BLM in performing photochemical air quality modeling analyses regarding continued oil and gas development on BLM-administered lands, as well as other emission sources including biogenics (emissions from vegetation and soils), non-oil and gas anthropogenic sources (including combustion emissions from mobile and stationary sources) in Utah (BLM 2020b). Specifically, the modeling analyses present the predicted impacts for projected oil and gas development activities under BLM jurisdiction in Uintah and Duchesne Counties (BLM-OGD) along with other non-oil and gas anthropogenic activities in 2025. Results of the modeling analyses indicated the following:

- The emissions from BLM-OGD were not responsible for any NAAQS, PSD increment, visibility, or deposition threshold violations.
- Contributions of the BLM-OGD emissions to air quality and air quality–related values were minor when compared to other emission sectors. For example, the maximum $PM_{2.5}$

PSD increment concentrations due to BLM-OGD emissions of 0.002 and 0.0016 µg/m^3 for annual and 24-hour averaging periods were predicted to occur at Arches National Park. While the concentrations from other source groups such as biogenic emissions, other oil and gas, and remaining existing emission sources ranged from 0.075 to 0.631 µg/m^3 and 0.212 to 7.738 µg/m^3 for annual and 24-hour averaging periods, respectively.

- BLM-OGD contributed between 4.22% and 8.88% to the total simulated daily 8-hour maximum O_3 concentrations in the Uinta Basin, and 0% to simulated O_3 8-hour maximum concentrations outside the Uinta Basin.
- BLM-OGD contributed less than 1% to total $PM_{2.5}$ concentrations and were four times less than contributions from other oil and gas development activities not on BLM-administered lands.
- 2025 predicted emissions resulted in improvements of air quality and air quality–related values at Class I, Class II, and sensitive lakes in Utah compared to 2011 base year emissions.
- BLM-OGD impacts were strongly confined to the Uinta Basin and, thus, not subject to long-range transport.

Reasonably foreseeable land actions that could occur after the land exchange would contribute additional criteria air pollutant and HAP emissions to the air quality analysis area but, when considered in conjunction with other air emission sources (biogenics and other non–oil and gas anthropogenetic sources, which are the main contributors as discussed above) and the above findings (which concluded BLM-OGD were not responsible for any NAAQS, PSD increment, visibility, or deposition threshold exceedances), no appreciable cumulative impacts would occur.

3.3 Climate Change and Greenhouse Gases

Climate change is a global issue that results from several factors, including the release of GHGs; land use management practices; changes to carbon sequestration from land use management practices; and the albedo effect, or reflectivity of various surfaces (including reflectivity of clouds). An analysis of regional climate impacts prepared by the Fourth National Climate Assessment (U.S. Global Change Research Project 2018) recognizes the Southwest (which includes the state of Utah) as a diverse region with a broad range of climate conditions, including the hottest and driest climate in the United States. Projected climate trends toward higher temperatures and drier conditions could increase the risk of water shortages and wildfires, reduce hydroelectric power potential and energy efficiency, and increase heat-related health impacts (U.S. Global Change Research Program 2018).

This analysis describes and evaluates land exchange impacts to climate and GHG conditions within 18 counties in the state of Utah (Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne Counties); hereafter referred to as the *GHG analysis area*. This spatial scale was established because it represents the primary area where land use change and GHG emissions would occur, in addition to recognizing other global effects. Emissions of GHGs would also occur outside the GHG analysis area from transport, processing, distribution, and end-use of fossil fuels. Because there are potentially tens to hundreds of thousands of mid-stream and downstream emissions sources, the BLM is only able to provide generic estimates of emissions and location of emissions from these sources. Information about mid-stream and downstream

GHG emissions is the same as described in the air quality section (Section 3.2). Downstream combustion emissions would occur in both stationary facilities or mobile sources such as vehicles and airplanes, which are regulated by the EPA, other federal agencies, or delegated to state agencies.

3.3.1 Affected Environment

3.3.1.1 Parcel-Specific Conditions

GHG emissions are long lasting in the atmosphere and although they generally do not have direct impacts to human health, GHGs present in the atmosphere absorb outgoing infrared radiation that would otherwise have escaped back to space (U.S. Global Change Research Program 2018). This phenomenon is known as the "greenhouse effect." Though the increase in atmospheric GHG concentrations impacts the global net energy balance, GHGs are discussed at the regional and statewide levels.

GHGs are emitted from mobile and stationary source fuel combustion, as well as industrial and agricultural processes. GHGs include multiple pollutants, the molecular structure of which allows the absorption of outgoing infrared radiation. The following are the primary GHGs emitted through anthropogenic activities:

- Carbon dioxide (CO_2), which is emitted through burning fossil fuels, solid waste, trees, and other biological materials and as a result of certain chemical reactions used in industrial processes (EPA 2022f).
- Methane (CH_4), which is emitted as a result of the production and transport of coal, natural gas, and oil; livestock and agricultural practices; and decaying organic waste (such as in municipal solid waste landfills) (EPA 2022f).
- Nitrous oxide (N_2O), which is emitted during agricultural and industrial activities, combustion of fossil fuels and solid waste, and during treatment of wastewater (EPA 2022f).
- Fluorinated gases, which are emitted from a variety of industrial processes (EPA 2022f).

The impact of GHGs on global warming and climate change depends upon the radiation and length of time these gases remain in the atmosphere (BLM 2021e). In order to estimate the effects each GHG has on the environment, a calculation factor known as Global Warming Potential is used to convert a mixture of GHG emissions to CO_2e. CO_2e is the equivalent of the amount of energy the emissions of 1 ton of the specified GHG would absorb over a given time period, relative to 1 ton of CO_2 for the same time frame (BLM 2021e).

The annual U.S. GHG emissions in 2020 were an estimated 5,222 million metric tons (megatonnes, or Mt) of CO_2e (EPA 2022d), which is a decrease of 9.1% from 2019 and a 21.5% decrease from 2005 (BLM 2021e). The annual GHG emissions in 2019 for the state of Utah were estimated to be 78 Mt of CO_2e, which was slightly up from 77.1 Mt in 2018, but down from its peak in 2005 of 83.5 Mt/year (BLM 2021e). In 2008, Utah established a renewable portfolio goal that requires all electric utilities to pursue renewable energy when it is cost effective. Each utility has a goal to generate 20% of its adjusted electricity retail sales with qualifying renewable sources by 2025. Renewable energy sources that meet this goal include solar, wind, geothermal, hydropower, hydrogen, municipal solid waste, landfill gas, and farm animal manure.

3.3.1.2 Management Framework

3.3.1.2.1 Greenhouse Gases

In 2007, the Supreme Court of the United States (SCOTUS) ruled in *Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438* that CO_2 and other GHGs are pollutants under the federal CAA, which the EPA must regulate if it determines that they pose an endangerment to public health or welfare. SCOTUS did not mandate that the EPA enact regulations to reduce GHG emissions. Instead, SCOTUS found that the EPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On April 17, 2009, the EPA issued a proposed finding that GHGs contribute to air pollution that could endanger public health or welfare. On April 24, 2009, the proposed rule was published in the *Federal Register* under Docket ID No. EPA-HQ-OAR-2009-0171. The EPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The EPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act" (EPA 2009). The findings were signed by the EPA Administrator on December 7, 2009. The final findings were published in the *Federal Register* on December 15, 2009. The final rule was effective on January 14, 2010. Although these findings alone do not impose any requirements on industry or other entities, this action is a prerequisite to regulatory actions by the EPA, including GHG emissions standards for light-duty vehicles.

On July 20, 2011, the EPA published its final rule deferring GHG permitting requirements for CO_2 emissions from biomass-fired and other biogenic sources until July 21, 2014 (EPA 2011a). Environmental groups have challenged the deferral. In September 2011, EPA released an "Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources" (EPA 2011b), which analyzes accounting methodologies and suggests implementation for biogenic CO_2 emitted from stationary sources.

On April 13, 2012, the EPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired generating units larger than 25 MW are required to limit emissions to 1,000 pounds of CO_2 per MW-hour on an average annual basis, subject to certain exceptions (EPA 2012a).

On August 16, 2012, the EPA issued emission rules (EPA 2012b) for oil production and natural gas production and processing operations, which are required by the CAA under 40 CFR Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order (EO) 13432 in 2007, directing the EPA, the U.S. Department of Transportation, and the U.S. Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks from model year 2011; in 2010,

EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (EPA 2010).

In 2010, President Barack Obama issued a memorandum directing the EPA, U.S. Department of Transportation, USDOE, and NHTSA to establish additional standards regarding fuel efficient and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model year 2017 to 2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 by model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 to 2021, and NHTSA intends to set standards for model years 2022 to 2025 in a future rulemaking On April 2, 2018, the EPA signed the Mid-Term Evaluation Final Determination, which finds that the model year 2022 to 2025 GHG standards are not appropriate and should be revised. This final determination serves to initiate a notice to further consider appropriate standards for model year 2022 to 2025 light-duty vehicles (EPA 2018).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 to 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23% over the 2010 baselines (EPA 2011c).

Building on the first phase of standards, in August 2016, EPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that would improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of approximately $170 billion.

The Energy Independence and Security Act of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.
- Requiring approximately 25% greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200% greater efficiency with light bulbs, or similar energy savings, by 2020.
- Establishing “miles per gallon” targets for cars and light trucks and directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks (although this was superseded by the EPA and NHTSA actions described above.

Additional provisions of the Energy Independence and Security Act of 2007 address energy savings in government and public institutions, promote research for alternative energy and carbon capture, and promote international energy programs and the creation of "green jobs."

3.3.1.2.2 Social Cost of Greenhouse Gases

The "social cost of carbon," "social cost of nitrous oxide," and "social cost of methane" (together, the "social cost of greenhouse gases" [SC-GHG]) are estimates of the monetized damages associated with incremental increases in GHG emissions in a given year.

On January 20, 2021, President Joe Biden issued EO 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. Section 1 of EO 13990 establishes an administration policy to, among other things, listen to the science; improve public health and protect our environment; ensure access to clean air and water; reduce GHG emissions; and bolster resilience to the impacts of climate change. Section 2 of the EO calls for federal agencies to review existing regulations and policies issued between January 20, 2017, and January 20, 2021, for consistency with the policy articulated in the EO and to take appropriate action.

Consistent with EO 13990, the Council on Environmental Quality (CEQ) rescinded its 2019 "Draft National Environmental Policy Act Guidance on Considering Greenhouse Gas Emissions" (CEQ 2021) and has begun to review (with the purpose of updating) its "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews" issued on August 5, 2016 (2016 GHG Guidance) (CEQ 2016). While CEQ works on updated guidance, it has instructed agencies to consider and use all tools and resources available to them in assessing GHG emissions and climate change effects, including the 2016 GHG Guidance. On January 9, 2023, the CEQ issued updated interim guidance to assist agencies in analyzing GHG and climate change impacts (CEQ 2023).

Regarding the use of SC-GHG or other monetized costs and benefits of GHGs, the 2016 GHG Guidance noted that NEPA does not require monetizing costs and benefits. It also noted that "the weighing of the merits and drawbacks of the various alternatives need not be displayed using a monetary cost-benefit analysis and should not be when there are important qualitative considerations" (CEQ 2016). SC-GHG estimates in this EA are provided only as a form of context for GHG emissions, which is consistent with the CEQ interim guidance on analyzing GHG's.

Section 5 of EO 13990 emphasized how important it is for federal agencies to "capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account" and established an Interagency Working Group (IWG) on the SC-GHG. In February of 2021, the IWG published *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide: Interim Estimates under Executive Order 13990* (IWG 2021). This is an interim report that updated previous guidance from 2016.

3.3.2 Proposed Action

Although the land exchange itself would not directly generate GHG emissions, such emissions are a reasonably foreseeable consequences of oil and gas and helium development, livestock grazing, solar development, reservoir development, or mining on BLM parcels 23–25, 27, 53, 53M, 53OG, and 54; SITLA parcels SE107–111, SE156, 157A, SE157B, SE158B, SE160B,

SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, and SE297B; and continued coal mining at the Williams Draw lease on BLM parcels 46–48 and 46C. There are three general phases of post-lease oil and gas development that would generate GHG emissions: 1) well development (well site construction, well drilling, and well completion), 2) production operations (processing, storage, and transport/distribution), and 3) end use (combustion) of the fuels produced.

For the parcels included in the Williams Draw lease area, mining-related and processing and transportation–related emissions were taken from the Williams Draw Lease By Application EA (BLM 2020a) and updated to reflect AR6 Global Warming Potentials. Mining-related emissions consisted of emissions resulting from the mining operation, hauling, and worker commuting. The processing and transportation–related emissions reflected emissions from rail transport off-site and eventual combustion of the product. This GHG emission and SC-GHG analysis was prepared in consideration of guidance issued by the CEQ on January 4, 2023, which includes quantifying the land exchange's projected GHG emissions for the expected lifetime of the action, in addition to the best available SC-GHG estimates (CEQ 2023).

For the Williams Draw lease, emissions of air pollutants at the Lila Canyon coal mine are currently limited by a production rate condition established in its existing approval order. Annual permitted emissions at the Lila Canyon coal mine would not increase as a result of the land exchange.

The total annual and life-of-lease emissions associated with the Williams Draw lease are included in Table 3.3-1; however, the mining related and processing and transportation emissions are shown separately to provide an accurate display of the resulting emissions. The timing of cessation of the federal coal leasing moratorium could affect the timing of these reported potential coal emissions on BLM parcels 46–48 and 46C, which are located in Emery County.

Table 3.3-1. Average Year GHG Mining-Related and Processing and Transportation–Related Emissions from the Williams Draw Lease

Source	CO_2 (Mt)	CH_4 (Mt)	N_2O (Mt)	CO_2e (Mt over 100 years)	CO_2e (Mt over 20 years)
Mining related	117,618	1,625	3	166,862	252,500
Processing and transportation related	343,334	26	9	346,566	347,936
End-use (combustion)	10,822,685	1,276	186	10,911,488	10,978,733
Total	11,283,637	2,927	198	11,424,916	11,579,169

For the parcels specified above in the first paragraph of Section 3.3.2, a reasonable quantification of GHGs was estimated with the BLM's lease sales emissions tools. The tool estimates GHGs based on the location and acreage of the specified parcel(s). Parcels were grouped based on similar potential future land use that could cause GHG emissions from oil and gas development. Total acres were input into the BLM lease sales emissions tool for the state of Utah, and historical well spacing per acre was used to estimate the potential amount of oil and gas development on the specified parcel(s). Oil and gas development data from the BLM VFO for the last 6 months of 2022 was used to estimate conservative lease development emissions for

specified parcel(s). Emissions were calculated for all parcels and acreage with similar potential future uses, assuming a 30-year production life for the parcels. The results of this analysis can be found in Table 3.3-2. Table 3.3-2 lists the estimated mining-related and processing and transportation–related GHG emissions in Mt for future lease sale on land exchange parcels over the average 30-year production life of the lease. GHG emissions vary annually over the production life of a well due to declining production over time.

Per Table 3.3-2, potential GHG emissions from reasonably foreseeable land actions that could occur after the land exchange could result in GHG emissions of 171.4 Mt CO_2e (100-year) over the production life of the coal parcels and 4,662 Mt CO_2e (100-yr) over the production life of the potential oil and gas wells. For coal, this would be the equivalent to the CO_2e emissions produced in 1 year by 333,350,080 homes. For oil and gas, it would be the equivalent to the CO_2e emissions produced by driving 1,037,333 gas-powered passenger vehicles for 1 year.

Table 3.3-2. Estimated Direct and Indirect Emissions on Life-of-Lease Basis

Parcels	County	Acres	CO_2 (Mt)	CH_4 (Mt)	N_2O (Mt)	CO_2e (100-year)	CO_2e (20-year)	Duration
SE107, SE108, SE109, SE110, SE111	Uintah	1,363.62	482,304	796.64	2.361	506,689	548,672	Life of lease
53, 53OG	Uintah	1,805	675,223	1,115.29	3.306	709,364	768,140	Life of lease
53M	Uintah	395	192,922	318.66	0.945	202,676	219,469	Life of lease
SE156, 157A	Emery	1,206.13	482,304	796.64	2.361	506,689	548,672	Life of lease
SE157B, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, SE297B	Wayne	856.02	289,383	477.98	1.417	304,013	329,203	Life of lease
54	Emery	4,480	1,446,913	2,389.91	7.084	1,520,066	1,646,015	Life of lease
23, 24, 25	Emery	2,357.37	771,687	1,274.62	3.778	810,702	877,875	Life of lease
27	Emery	119.29	96,461	159.33	0.472	101,338	109,734	Life of lease
46, 46C, 47, 48	Emery	5,113.07	169,254,555	43,905	2,970	171,373,734	173,687,528	Life of lease

Note: It is important to note that it is the actual production of fossil fuel commodities on leased parcels that generates GHG emissions and not the offering of acres or parcels for lease in a particular grouping of lease sales. Parcels offered in a lease sale could or could not be sold and sold parcels could or could not go into production for several years if at all.

3.3.2.1 Social Cost of Greenhouse Gases

In accordance with management direction discussed in Section 3.3.1.2.2, Table 3.3-3 provides estimates of the monetary value of changes in GHG emissions that could result from reasonably foreseeable land actions that could occur after the land exchange. The SC-GHGs associated with estimated emissions from BLM and SITLA parcels represent the present value of future market and nonmarket costs associated with CO_2, CH_4, and N_2O emissions. Estimates are calculated based on IWG estimates of social cost per metric ton of emissions for a given emissions year and BLM's estimates of emissions in each year. They are rounded to the nearest $1,000. These estimates assume development would start in 2023, and end-use emissions would be complete in 2056, based on experience with prior leases.

This analysis should not be construed to mean a cost determination is necessary to address potential impacts of GHGs. These numbers were monetized; however, they do not constitute a complete cost-benefit analysis, nor do the SC-GHG numbers present a direct comparison with other impacts analyzed in this document. SC-GHG is provided only as a useful measure of the benefits of GHG emissions reductions to inform agency decision making.

Table 3.3-3. Total SC-GHG (in 2020 dollars) Associated with Future Potential Development

Parcels	Average Value, 5% Discount Rate	Average Value, 3% Discount Rate	Average Value, 2.5% Discount Rate	95th Percentile Value, 3% Discount Rate
SE107, SE108, SE109, SE110, SE111	$8,116,000	$31,385,000	$47,754,000	$94,707,000
53, 53OG	$8,116,000	$31,385,000	$47,754,000	$94,707,000
53M	$2,292,000	$8,913,000	$13,575,000	$26,911,000
SE156, 157A	$5,796,000	$22,416,000	$34,109,000	$67,643,000
SE157B, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, SE297B	$3,477,000	$13,451,000	$20,467,000	$40,594,000
54	$17,393,000	$67,251,000	$102,326,000	$202,924,000
23, 24, 25	$9,251,000	$35,812,000	$54,505,000	$108,079,000
27	$1,159,000	$4,484,000	$6,823,000	$13,533,000
46, 46C, 47, 48	$2,089,652,820	$7,927,562,781	$12,034,015,947	$23,794,057,821

Note: For federal agencies, the best currently available estimates of SC-GHG are the interim estimates of the social costs of CO_2, CH_4, and N_2O developed by the IWG. Select estimates are published in the *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide: Interim Estimates under Executive Order 13990* (IWG 2021) and the complete set of annual estimates are available on the U.S. Office of Management and Budget's website.

The IWG's SC-GHG estimates are based on complex models describing how GHG emissions affect global temperatures, sea level rise, and other biophysical processes; how these changes affect society through, for example, agricultural, health, or other effects; and monetary estimates of the market and nonmarket values of these effects. One key parameter in the models is the discount rate, which is used to estimate the present value of the stream of future damages associated with emissions in a particular year. A higher discount rate assumes that future benefits or costs are more heavily discounted than benefits or costs occurring in the present (i.e., future benefits or costs are a less important factor in present-day decisions). The current set of interim estimates of SC-GHG have been developed using three different annual discount rates: 2.5%, 3%, and 5% (IWG 2021).

As expected with such a complex model, there are multiple sources of uncertainty inherent in the SC-GHG estimates. Some sources of uncertainty relate to physical effects of GHG emissions, human behavior, future population growth and economic changes, and potential adaptation (IWG 2021). To better understand and communicate the quantifiable uncertainty, the IWG method generates several thousand estimates of the social cost for a specific gas, emitted in a specific year, with a specific discount rate. These estimates create a frequency distribution based on different values for key uncertain climate model parameters. The shape and characteristics of that frequency distribution demonstrate the magnitude of uncertainty relative to the average or expected outcome.

To further address uncertainty, the IWG recommends reporting four SC-GHG estimates in any analysis. Three of the SC-GHG estimates reflect the average damages from the multiple simulations at each of the three discount rates. The fourth value represents higher-than-expected economic impacts from climate change. Specifically, it represents the 95th percentile of damages estimated, applying a 3% annual discount rate for future economic effects. This is a low probability, but high damage scenario that represents an upper bound of damages within the 3% discount rate model. The estimates in this table follow the IWG recommendations.

3.3.3 No Action

Under the No Action, the land exchange would not occur, and if the federal coal leasing moratorium is lifted, the parcels would still have the same development potential and interest under their respective original agencies. For example, the parcels that collectively make up the Williams Draw would continue with their present development and emissions regardless of the land exchange outcome (that is, the high-development scenario). Therefore, GHG emissions under the No Action would be the same as the Proposed Action, with exceptions for regulation and management differences. For example, the BLM has a statutory mandate to "use all reasonable precautions to prevent waste of oil and gas" (30 USC 225). Since the state does not have a similar rule, it is likely that upstream oil and gas emissions would be slightly higher for parcels that are under the jurisdiction of the state. Additionally, there remains uncertainty regarding future development in that the parcels could be developed differently than expected or not at all, therefore there will not be perfect substitution of development between the two agencies.

A low-development scenario was considered wherein the federal coal leasing moratorium would result in the Lila Canyon Mine being reclaimed, resulting in a reduction of emissions from reduced coal mining development. However, emissions would not be zero because coal mines continue to emit methane even after production has stopped; an estimated 12.5% of coal mine methane emissions occur from abandoned (underground) mines (EPA 2023). The Hunter and Huntington coal-fired power plants have 2,272 MW of capacity, which is 24% of the total generation capacity in the state of Utah (9,438 MW). In 2021, these plants generated 15,513 gigawatts, which is 37% of the total power generated in the state of Utah (42,113 gigawatts) (Mills et al. 2022). Although these plants do not rely solely on Lila Canyon Mine coal, the mine is an important energy source to these local power generators. ECCR contracts with Wolverine Fuels to haul the coal it produces directly to the Hunter and Huntington coal-fired power plants. ECCR has informed the BLM that if the Lila Canyon Mine stopped producing coal, these plants would see a 20% reduction of coal used for fuel generation and that these plants would not be able to readily replace this coal from the domestic market (BLM 2022m).

Insufficient information exists to know what potential sources of energy would be used for the substitution of the 20% loss of coal to the Hunter and Huntington coal-fired power plants in the short term. However, natural gas or renewable energy sources are the primary alternative forms of electricity generation and are strong substitutes for coal in energy generation, and they would result in an overall reduction of GHGs. The 2021 BLM annual GHG report for 2021 indicates that natural gas generates 515 grams of CO_2e per kilowatt-hour (g CO_2e/kWh) less GHG emissions than coal. Wind and solar power generate between 936 and 969 g CO_2e/kWh less than coal (BLM 2021e). In the long term, the Hunter and Huntington coal-fired power plants intend to close by 2032 and are looking for possible locations for future nuclear-powered stations (Higgins 2023). Replacing coal with nuclear power would result in the long-term reduction of GHGs by 968 g CO_2e/kWh.

A full lifecycle assessment is the sum of the direct and indirect GHG emissions of mineral production and the end use. The 2021 BLM annual GHG report estimates that federal coal emissions equate to 2.25 metric tons of CO_2e per ton of coal produced, compared to 0.07959 metric ton of CO_2e per ton of natural gas produced. This indicates that the replacement of the 20% loss of coal at the Hunter and Huntington coal-fired power plants with natural gas could decrease overall CO_2e emissions (BLM 2021e).

3.3.4 Cumulative Impacts

The EIA'S Annual Energy Outlook Report (AEO2023) (EIA 2022) looks at long-term trends in energy in the United States, taking into account changes in public law (i.e., Inflation Reduction Act), updates to technology costs and performance, and changes in macroeconomic outlook, which could alter future projections. The AEO2023 projects a drop in U.S. energy-related CO_2 emissions by 25% to 38% below the 2005 level by 2030. For reference, the United States' nationally determined contribution, submitted as part of the Paris Agreement, calls for a target of 50% to 52% of net GHG emissions below the 2005 level by 2030. The AEO2023 attributes the lower projected U.S. energy related–CO_2 emissions to increased electrification, equipment efficiency, and renewable technologies.

Although the land exchange would not be a direct source of GHG emissions, reasonably foreseeable land actions that could occur after the land exchange would also generate emissions of CO_2 and other GHGs, which could have an effect on local, regional, and global climate change should the future oil and gas leases and continued mining activities take place. GHG emissions would increase the concentration of GHGs in the atmosphere in combination with GHG emissions from other sources; however, the cumulative GHG emissions from future oil and gas leases and mining activities on the parcels, in combination with emissions produced by other reasonably foreseeable actions, would be insignificant compared with the amount of GHG emissions generated worldwide, which is projected to increase from 35 billion MT of CO_2 in 2020 to 43 billion MT in 2050 (BLM 2021).

GHGs, primarily emitted by natural and anthropogenic sources, trap heat in the atmosphere, which is partly responsible for the ongoing global climate changes issues. Globally, the atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of GHGs have increased (BLM 2021e). The annual average temperature in the United States has increased by 1.2°F over the last few decades and are expected to continue to increase to as much as 12°F by the end of the century. Additionally, annual average precipitation in the United States has increased by 4% with more frequent and intense precipitation events across the United States (BLM 2021e).

The BLM Annual GHG Report for 2021 (BLM 2021e) provides anticipated climate change impacts to temperature and precipitation in states where there are BLM-authorized fossil fuels. In Utah, temperatures have been increasing 0.2° to 0.3°F per decade since 1895, leading to overall higher temperatures not only during the day, but warmer nights as well. As the state has warmed, a decrease of approximately 20% has been observed in the average statewide snowpack. This reduction in snowmelt has triggered drought conditions, with 2012 being the driest spring on record since 1895.

3.4 Cultural Resources

Under NEPA, the BLM is responsible for evaluating the potential impacts to cultural resources from the implementation of the land exchange or alternatives to the action. The NHPA and its implementing regulations, 36 CFR Part 800, are used in parallel in support of NEPA to identify important cultural resources. In NHPA, important cultural resources are known as "historic properties," which are defined at 36 CFR 800.16(l)(1) as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior." Cultural resources for the purposes of NEPA include historic

properties as well as places of cultural significance that could or could not meet the criteria of a historic property.

3.4.1 Affected Environment

3.4.1.1 Cultural Context

Assessing the periods of significance for the cultural properties that are expected to be found within the *cultural resources analysis area* relies on understanding specific themes, individuals, and events influential in the region's past. To this end, a cultural resources literature review report was prepared that presents the chronological and thematic framework for archaeological resources that are expected to occur in the analysis area (Beck 2022). The cultural context is divided into two thematic periods—prehistory and history—which are then subdivided to reflect regional differences between the prehistory and history of northern Utah, southeastern Utah, and southwestern Utah to reflect cultural differences among the Native American groups who lived in these areas. These three areas are derived from BLM cultural resources permitting areas within Utah and are the Great Basin Area, San Juan Area, and Virgin Area. The San Juan Area includes San Juan County in southeast Utah and the Virgin Area includes both Washington and Kane Counties in southwest Utah. The Great Basin Area includes the remaining 26 Utah counties (Beaver, Box Elder, Cache, Carbon, Daggett, Davis, Duchesne, Emery, Garfield, Grand, Iron, Juab, Millard, Morgan, Paiute, Rich, Salt Lake, Sanpete, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Wayne, and Weber Counties).

3.4.1.2 Parcel-Specific Conditions

3.4.1.2.1 BLM Parcels

A total of 308 archaeological sites are reported on BLM parcels within the Great Basin Area. Of the 308 known sites in this area, 186 (61%) are prehistoric, 96 (31%) are historic, and 26 (8%) have both prehistoric and historic components. Of all 308 sites, 137 (44%) are eligible for the NRHP, 166 (54%) are not eligible for the NRHP, and five (2%) are unevaluated. Eligible and unevaluated or undetermined sites are summarized in Table 3.4-1 (Beck 2022). There are no known traditional cultural properties (TCPs) reported on BLM parcels in the Great Basin Area.

Table 3.4-1. Eligible and Unevaluated or Undetermined Archaeological Sites on BLM Parcels in the Great Basin Area

Site Number	Period	Site Type	NRHP Status
42JB01562; 42RI00165	Prehistoric	Artifact scatter	Eligible
42JB01008; 42JB01011; 42JB01013; 42JB01016; 42JB01021	Prehistoric	Campsite	Eligible
42EM02078	Prehistoric	Habitation and or multiple component camp	Eligible
42EM03663; 42JB00987; 42JB01006; 42JB01528; 42JB01531; 42JB02153; 42MD02343	Prehistoric	Lithic scatter	Eligible
42JB00646	Prehistoric	Lithic scatter	Unevaluated
42EM02073	Prehistoric	Lithic scatter: short term camp	Eligible
42EM01343	Prehistoric	Occupation rockshelter	Eligible

Site Number	Period	Site Type	NRHP Status
42BE01496; 42BE03784; 42BE03889; 42BE03893; 42CB03345; 42JB00637; 42JB00835; 42JB00881; 42JB00905; 42JB00908; 42JB00909; 42JB00931; 42JB00961; 42JB00967; 42JB00969; 42JB00995; 42RI00072; 42RI00103	Prehistoric	Open artifact scatter	Eligible
42EM01590; 42EM02068; 42EM02079; 42JB00897; 42JB00917	Prehistoric	Open artifact scatter with thermal feature(s)	Eligible
42EM00272	Prehistoric	Open artifact scatter with thermal feature(s)	Unevaluated
42EM03886; 42IN00954	Prehistoric	Open campsite	Eligible
42BE01558; 42BE01559; 42BE03891; 42CB03342; 42CB03343; 42EM02069; 42JB00636; 42JB00640; 42JB00641; 42JB00833; 42JB00837; 42JB00907; 42JB00910; 42JB00913; 42JB00915; 42JB00916; 42JB00918; 42JB00921; 42JB00929; 42JB00955; 42JB00956; 42JB00959; 42JB00964; 42JB00968; 42JB00974; 42JB00976; 42RI00058; 42RI00088; 42RI00090	Prehistoric	Open lithic scatter	Eligible
42RI00017; 42RI00026	Prehistoric	Open lithic scatter	Undetermined
42RI00166	Prehistoric	Prehistoric lithic scatter	Eligible
42EM01113	Prehistoric	Structural	Eligible
42JB00836; 42JB00838; 42JB00997; 42JB00999; 42JB01001; 42JB01015	Prehistoric	Temporary camp	Eligible
42JB00928	Multicomponent	Artifact scatter	Eligible
42EM02359; 42JB00895; 42RI00057	Multicomponent	Open artifact scatter	Eligible
42BE03783	Multicomponent	Open artifact scatter with thermal feature(s)	Eligible
42JB00899; 42JB00992	Multicomponent	Open artifact scatter; architectural-residential	Eligible
42JB00834; 42JB00958; 42JB00996	Multicomponent	Open lithic scatter	Eligible
42JB01007	Multicomponent	Prehistoric campsite/ historic artifact scatter	Eligible
42JB01017	Multicomponent	Prehistoric lithic scatter/ historic artifact scatter	Eligible
42JB00991; 42JB00993; 42JB00998; 42JB01000	Multicomponent	Temporary camp	Eligible
42UN02679	Historic	Agriculture/subsistence	Eligible
42JB00842	Historic	Architectural-general industrial	Eligible
42JB00482	Historic	Architectural-mining	Eligible
42JB00840; 42JB00841; 42JB00843	Historic	Architectural-other	Eligible
42JB00920; 42JB00923; 42JB00924; 42JB00925; 42JB00947; 42JB01002	Historic	Architectural-residential	Eligible

Site Number	Period	Site Type	NRHP Status
42JB00481; 42JB00702; 42RI00104	Historic	Artifact scatter	Eligible
42BE02257	Historic	Artifact scatter	Unevaluated
42JB01020	Historic	Campsite	Eligible
42BE04138	Historic	Charcoal kilns and associated features	Eligible
42EM03883	Historic	Historic building structure	Eligible
42RI00037	Historic	Historic canal segment	Eligible
42JB00756	Historic	Historic habitation	Eligible
42BE03180	Historic	Historic mining district and adjacent boom town	Eligible
42JB00927	Historic	Historic railroad	Eligible
42EM01646	Historic	Historic rockshelter	Eligible
42JB01019	Historic	Homestead	Eligible
42BE03248	Historic	Industry/processing/extraction	Eligible
42JB01800; 42JB01804; 42JB01810	Historic	Mine	Eligible
42BE03107; 42BE03110; 42BE03250	Historic	Mine complex	Eligible
42JB00938	Historic	Mining	Eligible
42JB01010	Historic	Mining mill	Eligible
42JB00983; 42JB00984; 42JB00988; 42JB02067	Historic	Other historic	Eligible
42JB00787; 42JB00839; 42JB00845	Historic	Railroad	Eligible
42JB02092	Historic	Road	Eligible
42RI00128	Historic	Trail/road without artifacts	Eligible

Existing records show the presence of 19 archaeological sites on BLM parcels within the San Juan Area. Of these 19 documented sites, 12 (63%) are prehistoric, six (32%) are historic, and one (5%) is a multicomponent site. Of all 19 sites in this area, six (32%) are eligible for the NRHP and 13 (68%) are not NRHP eligible. Eligible sites are summarized in Table 3.4-2 (Beck 2022). There are no known TCPs reported on BLM parcels in the San Juan Area.

Table 3.4-2. Eligible Archaeological Sites on BLM Parcels in the San Juan Area

Site Number	Period	Site Type	NRHP Status
42SA11566	Historic	Transportation/communication	Eligible
42SA11586	Prehistoric	Open architectural	Eligible
42SA16864	Historic	Other historic	Eligible
42SA24585	Prehistoric	Open village and campsite	Eligible
42SA25936	Historic	Civilian Conservation Corps erosion control feature	Eligible
42SA31777	Historic	Historic road	Eligible

Prior documentation shows the presence of four archaeological sites on BLM parcels within the Virgin Area. Of these four sites, three (75%) are prehistoric and one (25%) is historic. There are no multicomponent sites. There are no sites considered eligible for the NRHP and no known TCPs reported on BLM parcels in the Virgin Area; therefore, no table is presented for this area.

3.4.1.2.2 SITLA Parcels

Prior documentation reveals the presence of 94 archaeological sites on SITLA parcels within the Great Basin Area; there are no sites found on SITLA parcels in the San Juan Area or Virgin Area. Of the 94 sites, two do not have associated attribute data in the Utah Division of State History (UDSH) database nor do they have site records available in UDSH's UDAM archaeological records data. For the 92 sites with attribute data, 60 (65%) are prehistoric, 27 (29%) are historic, and five (5%) have both prehistoric and historic components. Additionally, 50 (54%) of the Great Basin Area sites are eligible for the NRHP, 36 (39%) are not eligible for the NRHP, and 6 (7%) are unevaluated. Eligible and undetermined sites are summarized in Table 3.4-3 (Beck 2022). There are no known TCPs reported on SITLA parcels in the Great Basin Area.

Table 3.4-3. Eligible and Unevaluated or Undetermined Archaeological Sites on SITLA Parcels in the Great Basin Area

Site Number	Period	Site Type	NRHP Status
42EM1209	Prehistoric	Artifact scatter	Eligible
42EM3647	Prehistoric	Artifact scatter and charcoal stain	Eligible
42EM1353	Prehistoric	Campsite	Eligible
42EM1107	Prehistoric	Habitation	Eligible
42EM2414; 42EM2416; 42EM3854	Prehistoric	Lithic scatter	Eligible
42EM717	Prehistoric	Lithic scatter with rock art	Eligible
42EM1911	Prehistoric	Lithic scatter/burned rock middens (camp)	Eligible
42EM3298	Prehistoric	Multiple pit houses with other features.	Eligible
42EM3435	Prehistoric	Non-structural miscellaneous	Eligible
42EM3192; 42EM3196; 42EM755; 42EM758	Prehistoric	Open architectural	Eligible
42EM3193	Prehistoric	Open artifact scatter	Eligible
42EM2420; 42EM3230	Prehistoric	Open artifact scatter with thermal feature(s)	Eligible
42EM1831; 42EM1910	Prehistoric	Open lithic scatter	Eligible
42EM640; 42EM642; 42EM643	Prehistoric	Open lithic scatter	Undetermined
42EM752	Prehistoric	Petroglyph	Undetermined
42EM1231; 42EM1823;	Prehistoric	Pictograph	Eligible
42EM1594; 42EM3194; 42EM3198; 42EM3380; 42EM4324; 42EM65	Prehistoric	Rock art	Eligible
42EM1913	Prehistoric	Rockshelter	Eligible
42EM3176; 42EM3197; 42EM3199; 42EM757; 42EM759	Prehistoric	Sheltered architectural	Eligible
42EM3173; 42EM3195; 42EM624	Prehistoric	Sheltered non-architectural	Eligible

Site Number	Period	Site Type	NRHP Status
42EM756	Prehistoric	Sheltered residential	Eligible
42EM1696	Prehistoric	Sherd and lithic scatter with feature and ground stone	Eligible
42EM3646	Prehistoric	Single pit house no other features	Eligible
42EM753	Prehistoric	Stone circle	Eligible
42EM751	Prehistoric	Stone circle	Undetermined
42EM4714	Multicomponent	Prehistoric Fremont site/historic check dams	Eligible
42EM3498; 42EM3509; 42EM3519; 42EM3543	Historic	Architectural: mining	Eligible
42EM2321	Historic	Buckhorn Flat Railroad (Denver and Rio Grande Western Railroad)	Eligible
42EM2329	Historic	Historic mining district	Eligible
42EM2328	Historic	Historic mining complex	Eligible
42EM4265	Historic	Historic survey markers	Eligible
42EM3530	Historic	Mining	Eligible

3.4.1.2.3 Equalization Parcels

Prior documentation indicates the presence of 11 archaeological sites on equalization parcels within the Virgin Area. Of the total 11 sites, 10 (91%) are prehistoric and one (9%) is historic. There are no multicomponent sites. Among all 11 Virgin Area sites, nine (82%) are eligible for the NRHP, and two (18%) are not eligible for the NRHP. Eligible sites are summarized in Table 3.4-4 (Beck 2022).

Table 3.4-4. Eligible Archaeological Sites on Equalization Parcels in the Virgin Area

Site Number	Period	Site Type	NRHP Status
42WS1236; 42WS1240; 42WS1243; 42WS1264	Prehistoric	Open artifact scatter	Eligible
42WS1239	Prehistoric	Open artifact scatter with thermal feature(s)	Eligible
42WS1265	Prehistoric	Sheltered architectural	Eligible
42WS1266; 42WS1267	Prehistoric	Sheltered non-architectural	Eligible
42WS355	Prehistoric	Open campsite	Eligible

3.4.1.3 Management Framework

The NHPA (54 USC 306108 et seq.) requires federal agencies to consider the effects of their undertakings on historic properties to the maximum extent possible, plan and act to minimize adverse effects, and afford the Advisory Council on Historic Preservation an opportunity to comment. The regulations at 36 CFR Part 800 specify a process to fulfill a federal agency's NHPA Section 106 review obligations.

Utah Code 9-8-404 likewise states that "Before approving any undertaking, an agency shall: (i) take into account the effect of the undertaking on any historic property; and (ii) provide the state historic preservation officer with a written evaluation of the undertaking's effect on any historic property."

3.4.2 Proposed Action

Under the land exchange, 331 known archaeological properties would be transferred from BLM to SITLA management. Of these, 143 are eligible for or listed in the NRHP, 183 are not eligible for the NRHP, and five are unevaluated for NRHP eligibility. Reasonably foreseeable land actions on BLM parcels that could occur after the land exchange, if implemented (see Table 3.1-1), could occur near these cultural resources; however, SITLA would need to comply with Utah Code 9-8-404, which requires state agencies to likewise consider the effects of their actions on NRHP-eligible properties.

Similarly, 105 known archaeological properties would be transferred from SITLA to BLM management via SITLA or equalization parcels (if needed for value equalization purposes). Of these, 59 are eligible for the NRHP, 38 are not eligible for the NRHP, six are unevaluated for the NRHP, and no eligibility information is available for two localities. Generally, all of the SITLA and any equalization parcels conveyed to the BLM would be managed for natural and cultural resources protection and be available for recreational use or continuation of existing encumbrances as established in the Dingell Act. Section 106 of the NHPA requires federal agencies to consider the effects of their actions on NRHP-eligible properties. Accordingly, these reasonably foreseeable land actions would not result in an appreciable cumulative impact to management of cultural resources.

3.4.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to cultural resources due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.4.4, Cumulative Impacts) could continue to result in impacts in the cultural resources analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. The continuation or lifting of the federal coal leasing moratorium would not adversely affect NRHP-eligible properties because any reclamation or future land activities on BLM parcel 46 (which contains two NRHP-eligible properties) would be a new undertaking and subject to a future Section 106 process.

3.4.4 Cumulative Impacts

Adverse impacts to cultural and historic resources could occur from other present and reasonably foreseeable projects, depending on the nature of the projects as described in Table 3.1-3. Although these projects vary in scope, any demolition, fill, grading, blasting, subsurface excavation, or vibration, as well as changes to the viewshed, could adversely affect existing cultural resources. If cultural resources are 1) present on private land where impacts from other present or reasonably foreseeable projects could occur, 2) privately funded, and 3) avoid any federal or state permitting, then protections on cultural resources would not necessarily be in place and these projects could have an adverse cumulative impact to cultural resources.

Projects that are directed, overseen, funded, partially funded, or permitted by the State of Utah or a federal agency would be subject to review under Utah Code 9-8-404 or Section 106 of the NHPA, respectively, and adverse effects would be avoided, minimized, and/or mitigated. For the Sawtooth Pipeline, North American Helium, Twin Bridges Bowknot Helium, and Lila Canyon

Mine Lease Modifications projects (see Table 3.1-3), the BLM determined these projects would not adversely affect historic properties. For other BLM projects where there is potential for the presence of historic properties, the BLM would not approve any ground-disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM could require modification to exploration or 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.

As part of the land exchange, the BLM and SITLA would need to comply with Section 106 of the NHPA and Utah Code 9-8-404, respectively, to consider the effects of their actions on NRHP-eligible properties. For BLM projects under consideration, consultation would occur with the SHPO under the Utah State Protocol Agreement (BLM 2020c). This regulatory protection would avoid, minimize, or mitigate adverse impacts to any cultural and historic resources within the cultural resources analysis area; therefore, the land exchange would not result in appreciable cumulative impacts to cultural resources.

3.5 Environmental Justice

The EPA (2022g) defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

This analysis describes and evaluates land exchange impacts to communities of environmental justice concern within 18 counties in Utah (Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne Counties), hereafter referred to as the *environmental justice analysis area*. The analysis area was established because most land exchange–related impacts likely to affect humans (for example, changes in commercial uses or changes in property access) would be experienced by individuals residing within commuting distance of the parcels at issue. Because all parcels to be exchanged are in Utah, the state of Utah was identified as the reference area.

3.5.1 Affected Environment

Minority, low-income, or Tribal populations that reside in the environmental justice analysis area were identified using methodology established in BLM (2022k) guidance, *Addressing Environmental Justice in NEPA Documents: Frequently Asked Questions* and data compiled by the U.S. Census Bureau. Using the Low-Income Threshold Analysis, any county with a low-income percentage of the population equal to or higher than the reference area was identified as having a low-income environmental justice community of concern. Similarly, using the BLM guidance thresholds for minority populations, any county where the proportion of residents self-identifying as something other than "white alone not Hispanic" was greater than 50% or exceeded 110% of the state average (also known as MGA or "meaningfully greater analysis") was identified as having a minority environmental justice population of concern. Finally, any county where the proportion of the population self-identifying as American Indian or Alaska Native Alone or in Combination with One or More Other Races exceeds the state average, is identified as having Tribal community of environmental justice concern.

Table 3.5-1 summarizes the environmental justice screening process. A total of 14 counties were identified as environmental justice communities of concern.

3.5.1.1 Parcel-Specific Conditions

No parcel-specific existing conditions were identified because this resource is evaluated at a county level. Appendix A discloses the county for each BLM and SITLA parcel and can be used to identify the specific parcels located in the 14 communities of environmental justice concern.

Table 3.5-1. Environmental Justice Screening Data and Results

Location (State or County)	Population*	Households with Income Below 200% of the Poverty Level†	Self-Identify as Something other than "White Alone Not Hispanic"*	Self-Identify as American Indian or Alaska Native Alone or in Combination‡	Environmental Justice Community?
State of Utah (reference area)	3,231,370	24.7%	22.7% 25.0% (MGA)	2.0%	Not applicable
Beaver	6,962	23.2%	16.0%	1.3%	No
Carbon	20,208	38.0%	17.7%	1.8%	Yes
Emery	9,839	31.9%	9.5%	2.4%	Yes
Grand	9,630	43.4%	18.8%	4.9%	Yes
Iron	55,839	38.6%	15.1%	2.6%	Yes
Juab	11,648	28.3%	9.3%	2.7%	Yes
Kane	7,635	31.5%	9.9%	5.1%	Yes
Millard	12,860	26.7%	17.1%	1.7%	Yes
Rich	2,507	29.7%	11.7%	2.8%	Yes
San Juan	14,610	44.1%	56.6%	49.8%	Yes
Sevier	21,471	33.6%	8.5%	1.5%	Yes
Summit	42,156	13.8%	16.0%	1.4%	No
Tooele	71,340	22.0%	18.9%	1.8%	No
Uintah	35,488	36.5%	19.5%	8.4%	Yes
Utah	648,265	25.8%	18.7%	1.3%	Yes
Wasatch	34,028	16.3%	17.1%	0.5%	No
Washington	176,533	27.4%	16.8%	1.7%	Yes
Wayne	2,500	33.2%	8.0%	1.7%	Yes

Note: Grayed cells identify environmental justice communities that are present based on the BLM's threshold.

* Data from U.S. Census Bureau (2022a).

† Data from U.S. Census Bureau (2022b).

‡ Data from U.S. Census Bureau (2022c).

3.5.1.2 Management Framework

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." More recently, EO 13990, Protecting Public Health

and the Environment and Restoring Science to Tackle the Climate Crisis, broadly reaffirmed the importance of environmental justice; and EO 14008, Tackling the Climate Crisis at Home and Abroad, updated elements of the environmental justice assessment process.

The primary guiding regulations at the federal level come from the CEQ (1997), which outlines a basic approach to evaluating environmental justice impacts under NEPA. The BLM (2022g) recently issued environmental justice guidance in Instruction Memorandum (IM) 2022-059, which "provides policy clarity for minimum requirements to elevate environmental justice at the BLM."

According to a 2021 report on environmental justice regulations at the state level, Utah had no state-based environmental justice regulations, nor did they have an agency responsible for environmental justice–related issues (Integral 2021).

3.5.2 Proposed Action

Table 3.5-2 summarizes reasonably foreseeable future land use changes that would occur on specific BLM, SITLA, and equalization parcels because of the land exchange. The table also describes the potential impacts to communities with environmental justice concerns associated with those land use changes. Development associated with reasonably foreseeable future land uses could disproportionately impact nearby environmental justice communities because they may be less capable of moving away from or otherwise adapting to changing land uses.

Table 3.5-2. Reasonably Foreseeable Future Land Uses and Impacts

Reasonably Foreseeable Future Land Uses	Parcels	Affected Counties	Environmental Justice Impacts
Lands maintain current use with generally reduced future potential for development.	SE101– SE111, SE112–SE134, SE135A–B, SE136–SE149, SE150A, SE150B, SE151–SE156, SE157A, SE157B, SE158A, SE158B, SE159, SE160A, SE160B, SE161–SE202, SE203A–B, SE204, SE205, SE206A–B, SE207–SE212, SE213A–B, SE214, SE215, SE216A–C, SE217–SE223, SE224A–B, SE225–SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE285, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B, 3C–3E, 7A–7C	Emery, Grand, Uintah, and Wayne	As noted in Section 1.4, SITLA lands, once conveyed to the BLM, would generally be managed for resource protection and recreational use in the foreseeable future. However, recreational use, grazing, ROWs, mineral development, and other uses would continue to occur where conveyed with existing encumbrances. Since land uses would remain similar to current activities, no impact to environmental justice communities is anticipated.
No specific SITLA uses are currently contemplated and current activities presumed to continue.	20, 32	San Juan and Wasatch	Current activities on the BLM parcels are presumed to continue. Since land uses would remain similar to current activities, no impact to environmental justice communities is anticipated.

Reasonably Foreseeable Future Land Uses	Parcels	Affected Counties	Environmental Justice Impacts
Continued livestock grazing, rangeland, and commercial guided hunting, but under private ownership.	1–5, 2S, 3S, 5S, 21	Rich and Carbon	Land use on these BLM parcels would remain similar to current land use. Converting these parcels from public to private ownership could alter public access which could disproportionately affect low-income residents. However, as noted in Section 3.14, public recreation use is limited in parcels 1–5, 2S, 3S, and 5S due to private land ownership patterns, and would continue to be limited after conveyance to SITLA. Parcel 4 contains a portion of Neponset Reservoir; however, the reservoir is not currently accessible because it is surrounded by private land. Parcel 21 contains limited recreation opportunities; there is less than 1 mile of Facility Asset Management System roads within these parcels, but public access to those roads is restricted due to private land ownership and gates.
Residential Development	6, 15	Utah and Wasatch	The two BLM parcels represent approximately 180 acres. Residential development would generate direct GHG and criteria emissions, increase noise and traffic, eliminate public access to these lands, and potentially increase erosion and sedimentation into surface waters from stormwater runoff during construction, if these actions are implemented after the land exchange is complete. Any future development would be wholly contingent on market forces and the pattern of growth on adjacent lands. Compliance with state and federal air and water quality regulations would minimize potential impacts. However, environmental justice communities could be more susceptible to these impacts due to pre-existing health conditions or other factors.

Reasonably Foreseeable Future Land Uses	Parcels	Affected Counties	Environmental Justice Impacts
Solar Energy Development	8–13, 23–25, 33	Beaver, Emery, Juab, and Kane	These parcels encompass approximately 6,606 acres of land. Solar development would generate direct GHG and criteria emissions, increase noise and traffic, eliminate public access to these lands, and potentially increase erosion and sedimentation into surface waters from stormwater runoff during construction, if these actions are implemented after the land exchange is complete. Compliance with state and federal air and water quality regulations would minimize potential impacts. Development could also support a long-term decrease in global GHG emissions if it replaces more traditional energy sources. However, environmental justice communities could be more susceptible to any adverse impacts due to pre-existing health conditions or other factors.
Recreational Development	17, 26	Emery and Wasatch	These parcels encompass approximately 1,179 acres of land. Potential adverse impacts during construction to environmental justice communities would be similar to other development actions discussed above. Impacts associated with operation of recreational developments could vary. If the development improves public access to local recreation opportunities, these future actions could benefit environmental justice communities. Whereas private development that restrict public use could adversely affect low-income residents.
Reservoir development	27	Emery	Parcel 27 encompasses 119 acres of land. Potential adverse impacts during construction to environmental justice communities would be similar to other development actions discussed above. While compliance with state and federal air and water quality regulations would limit potential impacts, environmental justice communities could be more susceptible to impacts from emissions due to pre-existing health conditions or other factors. Effects to environmental justice communities based on changes to public access and/or government revenues would be dependent upon the nature of the reservoir, which is unknown at this time.

Reasonably Foreseeable Future Land Uses	Parcels	Affected Counties	Environmental Justice Impacts
Industrial Development	28–30	Emery	These parcels encompass approximately 5,757 acres of land. Potential adverse impacts during construction to environmental justice communities would be similar to solar development discussed above, although the net effect to GHGs is uncertain. Environmental justice communities could be more susceptible due to pre-existing health conditions or other factors.
Mineral Exploration, Underground Coal Mining, or Oil and Gas Development.	34–44, 46–50, 46C, 51M–52M, 53–54, 53M, 53OG, including 35M, 38M, 38S, 39S	Beaver, Emery, Juab, Millard, Sevier, and Uintah	These parcels encompass approximately 51,982 acres of surface land or mineral and surface land and an additional 4,795 acres of mineral only land, and 120 acres of coal only land. Exploration and mining, coal and oil and gas development would generate GHG and criteria emissions for the duration of project lifespans. While compliance with state and federal air quality regulations would limit potential impacts, environmental justice communities could be more susceptible to impacts from emissions due to pre-existing health conditions. These actions would also reduce access to public lands and recreation areas, including Fivemile Pass Recreation Area, Sheeprock/Tintic Off-Road Vehicle Area, Beaver County lands, and Price Extensive Recreation Management Area, which could disproportionately affect low-income residents.

3.5.3 No Action

Under the No Action, the land exchange would not occur, and if the federal coal leasing moratorium is lifted, conditions for environmental justice communities would remain the same. As discussed in Sections 3.2 and 3.3, if the coal leasing moratorium is not lifted, reported criteria, HAPs, and GHG emissions would be reduced for BLM parcels 46–48 and 46C, which could benefit environmental justice communities in the vicinity. Potential sources of energy substitution at the Hunter and Huntington coal-fired power plants, which use coal from the Lila Canyon Mine, would likely consist of natural gas or renewable energy sources. These sources would result in a long-term GHG reduction as compared to coal, which could also benefit environmental justice communities in the vicinity.

All activities that currently occur on the parcels would be expected to continue under existing management (see Table 3.1-1 and Table 3.1-2) and regulations, in accordance with the relevant laws, regulations, and guidance as described in Section 3.5.1.2, and any other applicable regulation, policy or guidance.

3.5.4 Cumulative Impacts

Other present and reasonably foreseeable trends and actions, such as those described in Table 3.1-3, could create the following adverse or positive impacts among environmental justice communities of concern:

- As discussed throughout this EA, development of previously undisturbed areas has the potential to reduce soil, water, and air quality through the reduction of vegetation, disturbance of soil, and through emissions generated from equipment used for construction or operation of the development. Additionally, construction could bring additional traffic, noise, dust, or emissions that would temporarily impact nearby communities. An influx of workers could create excess demands on the public services of communities or put upward pressure on housing costs. These impacts could be disproportionately felt by low-income or minority populations by virtue of their proximity to the impact or due to an increased susceptibility to the impact.
- Development, and any associated influx of workers, has the potential to stimulate economic activity and fund increases in the provision of public services.
- Development has the potential to reduce the availability of public lands for recreation, which may disproportionately impact low-income populations.

Overall, the land exchange would not contribute to potential disproportionate adverse impacts to low-income and minority populations. However, as outlined in Table 3.5-2, localized environmental justice issues surrounding specific parcels may occur if reasonably foreseeable land actions occur after the land exchange.

3.6 Fishes and Aquatic Animals

The USFWS manages federally threatened and endangered fish and aquatic animal species under the ESA, and the BLM manages sensitive species in Utah (collectively referred to as designated fishes). All other fishes (non-designated) are managed by the Utah Division of Wildlife Resources (UDWR).

3.6.1 Affected Environment

3.6.1.1 Parcel-Specific Conditions

3.6.1.1.1 Designated Fish and Aquatic Species

Designated fish species are species that are protected either by the USFWS or the BLM. Table 3.6-1 below shows designated fish species, their listing status, county, BLM FO, water bodies where present, and parcels that support their habitat needs. Five BLM parcels and six SITLA parcels provide fish habitat for designated species. Parcels 150A and 150B each contain less than 1 acre of critical habitat for Colorado pikeminnow (*Ptychocheilus lucius*) and razorback sucker (*Xyrauchen texanus*), respectively. Equalization parcels do not provide fish habitat.

There is potential for BLM sensitive springsnail species (*Pyrgulopsis* sp.) to occur in any parcel that contains spring habitat; however, distribution and species-level identification are poorly known. There is one record of the southern Bonneville pyrg (*Pyrgulopsis transversa*) on private land adjacent to the Southwest Tintic parcels (BLM parcels 35–38) (BLM 2023a). Spring habitats on BLM parcels 1, 2, 5, 5S, 36, 38, 39, 42, and 46; SITLA parcels SE154, SE156, SE175, SE182, SE184, SE186, SE187, SE190, SE191, SE211, SE220, and SE276; and equalization parcel 7C also have the potential to support springsnail species.

Table 3.6-1. Designated Fish that Could be Present in the Analysis Area

Common Name	Scientific Name	Status*	County	Managing BLM FOs	Water Bodies Where Present	Parcels Where Present†
Bonneville cutthroat trout	*Oncorhynchus clarkii utah*	BLM S	Rich	SLFO	Meachum Canyon	3, 3S
Bluehead sucker	*Catostomus discobolus*	BLM S	Emery	PFO	Cottonwood Creek, Millsite Reservoir	24, 25, 26
Bonytail	*Gila elegans*	E	Emery	PFO	Green River, Price River, San Rafael River	SE133, SE137, SE150A–B, SE151, SE174
Colorado pikeminnow	*Ptychocheilus lucius*	E	Emery	PFO	Green River, San Rafael River	SE150A–B
Humpback chub	*Gila cypha*	T	Emery	PFO	Green River, Price River, San Rafael River	SE133, SE137, SE150A–B, SE151, SE174
Flannelmouth sucker	*Catostomus latipinnis*	BLM S	Emery	PFO	Cottonwood Creek	24
Razorback sucker	*Xyrauchen texanus*	E	Emery	PFO	Green River, Price River, San Rafael River	SE133, SE137, SE150A–B, SE151, SE174
Roundtail chub	*Gila robusta*	BLM S	Emery	PFO	Cottonwood Creek	24

* BLM S = BLM sensitive; E = USFWS endangered; T = USFWS threatened.

† Excludes parcels only conveying subsurface mineral rights.

3.6.1.1.2 Non-designated Fish and Aquatic Animal Species

Non-designated fish species are those native and non-native species that are not protected by the USFWS or the BLM. There are 76 species identified by the UDWR (2019) as being present in the state. In the *fish and aquatic species analysis area*, the Green River, San Rafael River, Price River, Cottonwood Creek, Range Creek, and Millsite Reservoir support non-designated fish species. Intermittent streams and other water bodies such as lakes and ponds also support some of these species. The parcels identified in Table 3.6-1 support non-designated fish habitat; additional habitat present is also present in parcels SE220, SE262, SE282, and SE287A.

3.6.1.2 Management Framework

Relevant statutes, regulations, and other guidance that inform fish species and habitat management are as follows:

- The CWA (33 USC 1251 et seq.) establishes the basic structure for regulating discharges of pollutants into the waters of the United States (WOTUS) and regulating quality standards for surface waters. Both the BLM and SITLA are required to adhere to all provisions within this law regarding water quality.
- The ESA (USC 1531 et seq.) establishes protections for fish, wildlife, and plants that are listed as threatened or endangered to avoid take of these species. Both the BLM and SITLA are required to adhere to all provisions within this law regarding fish.
- BLM FO RMPs establish management goals, objectives, and decisions for protecting sensitive species and fisheries. These plans do not apply to SITLA lands.
- BLM Manual 6840 *Special Status Species Management* (2008b) establishes policy for management of species listed or proposed for listing pursuant to the ESA, and BLM sensitive species that are found on BLM-administered lands. This policy does not apply to SITLA lands.
- The 2015 Utah State Wildlife Action Plan (SWAP) establishes policy and management goals for fish and wildlife species. The goal of the SWAP is to "manage native wildlife species and their habitats, sufficient to prevent the need for additional listings under the Endangered Species Act" (UDWR 2015). SITLA seeks input from UDWR and works cooperatively on wildlife management issues on SITLA lands to the extent they align with the best interest of the trust beneficiaries. However, SITLA is not obligated to adhere to the policy and management goals of the SWAP on SITLA lands.
- The State of Utah's Administrative Rule R657-13 establishes rules and regulations for the taking of fish.
- The 2017 conservation agreement for springsnail species in Nevada and Utah establishes conservation objectives, tasks, and responsibilities to promote the conservation of springsnail species and associated habitats (BLM et al. 2017).

3.6.2 Proposed Action

Fish habitat present on or adjacent to BLM parcels 24, 25, and 26 could be indirectly impacted by reasonably foreseeable solar energy development and recreation development on SITLA lands that could occur after the land exchange (see Table 3.1-1). Although no in-water work is anticipated, construction or other surface-disturbing activities from these future land use

activities, if implemented, could increase erosion and potential sedimentation of adjacent fish-bearing waters, which could adversely affect designated and non-designated fish health for downstream individuals. However, these effects would cease when construction ends, and SITLA would be required to comply with the CWA and ESA to avoid or minimize water quality and would work cooperatively with UDWR to avoid or minimize species impacts to the extent practicable. No future land use changes that could result in fish species or habitat impacts are anticipated for BLM parcels 3 and 3S.

The administrative conveyance of parcels in the land exchange would not directly increase water withdrawals that could result in reductions to downstream water availability. However, water use for reasonably foreseeable solar development on BLM parcels 24–25 could, depending on the water source, reduce surface flows.

Reasonably foreseeable mineral exploration on BLM parcels 36, 38, 39, and 42 and coal mining on BLM parcel 46 could also impact springsnail species or other mollusk species, if these activities result in a loss of habitat or water development near the springs capable of supporting these species. Reasonably foreseeable livestock grazing and rangeland and commercial guided hunting associated with BLM parcels 1, 2, 5, and 5S are anticipated to be consistent with current land uses and therefore unlikely to alter spring habitat conditions. Future land uses on SITLA parcels SE133, SE137, SE150A and B, SE151, SE154, SE156, SE174, SE175, SE182, SE184, SE186, SE187, SE190, SE191, SE211, SE220, and SE276 conveyed to the BLM would generally involve natural and cultural resources protection, recreation use, and continuation of existing encumbrances as established in the Dingell Act; these land uses are not expected to adversely impact fish or aquatic animals or their habitat. There are no equalization parcels containing fish habitat, but one equalization parcel (7C) contains mapped springs. Conveyance of the SITLA and equalization parcels to the BLM could provide a benefit to some fish and aquatic species and habitat by creating a more contiguous ecosystem for species management and increased management oversight for sensitive fish and aquatic species, as established in BLM RMPs and BLM Manual 6840 (BLM 2008b).

3.6.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to fish species due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.6.4, Cumulative Impacts) could result in impacts in the fish and aquatic animal analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. The continuation, or lifting, of the coal leasing moratorium would not affect fish species or habitat because this resource does not occur on BLM parcels with coal leases. Continuation of the coal leasing moratorium would likely benefit springsnail species in the short term because reclamation of BLM parcels would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. However, future land use activities after reclamation is complete could reintroduce a risk to individual species if these activities result in habitat loss or alteration.

3.6.4 Cumulative Impacts

Cumulative effects on fish and aquatic species or habitat could occur if overlapping actions result in modification, degradation, or fragmentation of habitat, or affect the natural processes that sustain individuals and their ability to feed, breed, and shelter.

Only two reasonably foreseeable projects in Table 3.1-3 (Restoration and Fuels Reduction Prescribed Fire Project in the Manti-La Sal National Forest and active BLM oil and gas leases) are located within 1 mile of land exchange parcels that are directly adjacent to fish habitat. Specific locations and timing of prescribed fire activity within the Manti-La Sal National Forest would be determined during implementation. However, although fires can affect aquatic species, analysis conducted for the Restoration and Fuels Reduction Prescribed Fire Project indicates that habitat avoidance and application of design elements would make impacts unlikely (U.S. Forest Service 2021). There are also 1,660 acres of active, but currently non-producing, oil and gas leases on BLM parcels 24 and 25 that, if developed, could indirectly affect fish habitat if activities result in erosion and potential sedimentation of adjacent fish-bearing waters. However, most of this acreage does not contain or is not directly adjacent to perennial streams.

Reasonably foreseeable projects in Table 3.1-3 that are not currently in operation and could occur on or near parcels containing mapped springs would be limited the following:

- Portions of active, non-producing BLM oil and gas leases (parcel 2)
- Cross-Tie 500-kilovolt transmission project (parcel 42)
- Goblin Valley Distribution and Telecommunication Lines project (parcel SE276)
- Residential development (parcel 7C)
- Lila Canyon Mine Lease Modifications (parcel 46)

Although distribution is not well documented, individual springsnails could be adversely affected if activities occur in close enough proximity to alter spring habitats that contain these species. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment. Reasonably foreseeable land actions that could occur after the land exchange could also temporarily degrade fish or spring habitat near parcels 24, 25, 26, 36, 38, 39, 42, and 46; however, because of the localized nature of these habitat changes and low potential for other reasonably foreseeable project impacts as discussed above, the land exchange would not result in appreciable cumulative impacts.

3.7 Floodplains

Pursuant to EO 11988, Floodplain Management, the term floodplain is used to describe “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.”

3.7.1 Affected Environment

3.7.1.1 Parcel-Specific Conditions

Floodplains frequently contain wetlands and other important ecological areas that directly benefit the local environment in several ways, including fish and wildlife habitat protection, natural flood and erosion control, surface water quality maintenance, groundwater recharge, biological

productivity, and higher quality recreational opportunities (through fishing, boating, bird watching, etc.) (FEMA 2022).

There are approximately 144 total acres of 100-year FEMA floodplains in the *floodplains analysis area* (FEMA 2021), as well as additional unmapped floodplains associated with the Green, San Rafael, and Price Rivers and Range, Muddy, and Cottonwood Creeks. Table 3.7-1 provides a summary of these floodplains, which occur across 14 parcels. Equalization parcels do not contain floodplains.

Table 3.7-1. Floodplains in the Analysis Area

Description	Acres	County	Parcels Where Present*
Unmapped floodplain associated with Dutchman's Wash	N/A	Emery	23
Unmapped floodplain associated with the Millsite Reservoir	N/A	Emery	26
100-year FEMA floodplain	128.0	Uintah	53
100-year FEMA floodplain	8.6	Uintah	SE103
100-year FEMA floodplain	7.6	Uintah	SE105
Unmapped floodplain associated with the San Rafael and the Green Rivers	N/A	Emery	SE150A
Unmapped floodplain associated with the San Rafael River	N/A	Emery	SE151, SE174
Unmapped floodplain associated with the Price River	N/A	Emery	SE133, SE137
Unmapped floodplains associated with Muddy Creek	N/A	Emery	SE220, SE262, SE282, and SE287A

Note: N/A = not available due to lack of spatial data.

* Excludes parcels only conveying subsurface mineral rights.

3.7.1.2 Management Framework

Parcels that contain floodplains are subject to local floodplain zoning ordinances, as well as EO 11988, which—among other things—requires agencies to avoid actions located in or that would adversely affect floodplains (unless there is no practicable alternative) and to take action to mitigate losses if avoidance is not practicable. Per this EO, when property in floodplains is proposed for disposal to public or private parties, federal agencies must, among other things, "reference in the conveyance those uses that are restricted under identified Federal, State or Local floodplain regulations."

Utah floodplain laws were drafted in partnership with national, state, and local building codes. FEMA sets a basic standard of regulations for communities participating in the National Flood Insurance Program (NFIP), but NFIP ordinances and regulations are handled at the community level; 220 communities in Utah participate in the NFIP (Utah Department of Public Safety 2022).

3.7.2 Proposed Action

Under the land exchange, a total of approximately 144 total acres of 100-year FEMA floodplains would be present on BLM parcels transferred to SITLA. Additional unmapped floodplains, based on their association with the rivers and creeks identified in Section 3.7.1.1, would be present on parcels transferred both to and from the BLM (see Table 3.7-1).

Reasonably foreseeable changes in future land uses on three BLM parcels (23, 26, and 53) conveyed to SITLA could result in changes in floodplain function or values and flood risk, as

further described in Table 3.7-2. Regardless of the type of development, however (as noted in Section 3.7.1.2, pursuant to EO 11988, Section 3(d)), when properties that contain floodplains are proposed for lease, easement, ROW, or disposal, the BLM must reference in the conveyance that certain uses are restricted under relevant federal, state, or local floodplain regulations, which could ultimately limit disturbance to overall floodplain function.

Table 3.7-2. Reasonably Foreseeable Future Land Uses and Impacts to BLM Parcels Conveyed to SITLA

Parcels	Reasonably Foreseeable Future Land Use	Impacts
23	Solar energy development	Solar development has the potential to disturb floodplain function by altering drainage patterns or interrupting overland flow routes across the solar development site. Rain that falls on the panels would drain freely off the panels and onto the permeable surface below, which, depending on the type of vegetative groundcover and existing site characteristics, has the potential to influence the surface water runoff characteristics of a site (USDOE and Central Bedfordshire Council 2023). The risk of flooding could be minimized in the design of solar development by raising all electrical equipment above the projected level of flooding and incorporating drainage facilities to help direct excess surface water (USDOE and Central Bedfordshire Council 2023).
26	Recreational development	As with development of solar energy sites, development of recreational facilities could impact floodplain function by altering drainage patterns or interrupting overland flow routes. Development of structures in a floodplain could also degrade floodplain function via the clearing of vegetation during construction, the placement of fill, and increasing pollution sources, among other impacts. The use of structural flood mitigation techniques, such as wet or dry floodproofing, and elevating buildings to allow floodwater to travel through or under the structure, would help minimize impacts (National Flood Insurance 2019).
53	Lease potential for oil and gas	According to FEMA's Flood Map for Uintah County unincorporated areas, parcel 53 contains Zone A Special Flood Hazard Areas. Future speculative land uses for parcel 53 consist of oil and gas development. Oil and gas development could impact floodplain function in many of the same ways as other development, by interrupting flow patterns and site permeability; however, according to FEMA's *Interim Technical Guidance on Drilling Oil and Gas Wells in Special Flood Hazard Areas*, if a drilling site is in the floodway portion of a floodplain, the developer would need to conduct an engineering study that demonstrates that there would be no increase in flood stages during the discharge of a 100-year flood caused by the development (FEMA 2014).

Floodplains present on SITLA parcels would not be adversely affected by reasonably foreseeable actions (see Table 3.1-2) because lands conveyed to the BLM would be managed for natural and cultural resources protection, as well as for recreation use or the continuation of existing encumbrances as established in the Dingell Act.

3.7.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to floodplains due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.7.4, Cumulative Impacts) could result in impacts in the floodplains analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and

regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. The continuation, or lifting, of the federal coal leasing moratorium would not affect floodplains because this resource does not occur on BLM parcels with coal leases.

3.7.4 Cumulative Impacts

Cumulative effects on floodplains could occur if overlapping actions result in reduction of natural and beneficial floodplain values, including flood conveyance, storage, and control; groundwater recharge; water quality function; and wildlife habitat and diversity; however, only two specific reasonably foreseeable projects in Table 3.1-3 (Restoration and Fuels Reduction Prescribed Fire Project in the Manti-La Sal National Forest and active BLM oil and gas leases) are located in or within 1 mile of parcels containing floodplains. Specific locations and timing of prescribed fire activity within the Manti-La Sal National Forest would be determined during implementation. However, the Restoration and Fuels Reduction Prescribed Fire Project is not anticipated to result in the use or modification of floodplains in parcel 26. U.S. Forest Service analysis indicated that the project would be consistent with EO 11988 and that project design elements, including best management practices, would protect aquatic influence zones and floodplains (U.S. Forest Service 2021).

There are 642 acres of active, non-producing and 2 acres of active, allocated oil and gas leases on BLM parcels 23 and 53, respectively, that, if developed, could affect unmapped or FEMA floodplains if activities interrupt flow patterns or site permeability. However, the BLM would include protective measures for floodplains as part of lease stipulations. Reasonably foreseeable land actions that could occur after the land exchange could adversely impact floodplain function in the vicinity of BLM parcels 23, 26, and 53 if alteration of existing hydrological conditions occurs as result of development; however, compliance with EO 11988—which would require the BLM to reference in the conveyance that certain uses are restricted under relevant federal, state, or local floodplain regulations—would minimize these impacts. Therefore, when the land exchange is considered in combination with the low potential for other reasonably foreseeable action impacts, no appreciable cumulative impacts would occur.

3.8 Fuels and Fire Management

The wildland fire environment can generally be described as a combination of fuel characteristics, probability of fire occurrence, predicted fire behavior, fire history, wildfire response, and fuels management. Fuels, fire behavior, and likelihood of wildfire ignition are evaluated for all parcels which could have their wildland fire environment and/or fuels management impacted by the land exchange, referred to as the *fuels and fire analysis area*.

3.8.1 Affected Environment

3.8.1.1 Parcel-Specific Conditions

The BLM and SITLA parcels proposed for the land exchange display variability in their fire environment, including fuel models, predicted fire behavior, likelihood of wildfire occurrence, and recent fire history. Equalization parcels are not anticipated to have their fire and fuels management impacted by the land exchange and are therefore not analyzed in detail.

The general classification of fuels is by fire-carrying fuel type (Scott and Burgan 2005):

- (NB) Non-burnable
- (GR) Grass

- (GS) Grass-shrub
- (SH) Shrub
- (TU) Timber-understory
- (TL) Timber litter

Fuels are then further classified into specific fuel models within a fuel type (e.g., GS1, GS2, GS3, and GS4 are the fuel models within the grass-shrub fuel type). There are 40 fuel models, which are based on fuel depth, load, and other characteristics of the fuel type and are used to summarize and predict fire behavior. Generally, higher numbers indicate an increase in fuel loading. The distribution of the fuel models across the landscape was accessed in the Utah Department of Natural Resources (UDNR) Wildfire Risk Assessment Portal (UWRAP) (UDNR 2022a) and LANDFIRE (LANDFIRE 2022).

Predicted fire behavior can be described by many metrics, including rate of spread (ROS),[13] and flame length[14](UDNR 2022a). Modeled fire behavior in this analysis is based on 97th percentile (i.e. extreme) weather conditions.

Likelihood of wildfire ignition represents the likelihood of a wildfire igniting based on historical ignition patterns. Occurrence is derived by modeling historic wildfire ignition locations to create an ignition density map. The ignition rate is measured in the number of fires per 1,000 acres per year (UDNR 2022a).

Recent fire history looks at fires that have occurred in the last 20 years that have impacted land within or near the parcels that could be exchanged (UDNR 2022a).

3.8.1.1.1 BLM Parcels

BLM parcels that could have their wildland fire environment and/or fuels management impacted by future land use and/or land management changes consist of the following: 2S, 3S, 6, 8–15, 17, 21, 23–30, 33–35, 35M, 36, 38, 38M, 38S, 39, 39S, 40–44, 46, 46C, 47–50, 51M, 52M, 53OG, and 54 (see Table 3.1-1).

These BLM parcels vary considerably in their fire behavior (Tables 3.8-1–3.8-4). Parcels that display more extreme predicted fire behavior include 6–8, 21, 34, 35, 35M, 36–38, 38M, 39, 39S, 40, 42, 43, 44, 46, 46C, 47, 48, 52M, and 53OG due to their complex terrain and grass-shrub and shrub fuels. (Table 3.8-1 to 3.8-4). Parcels that display more mild fire behavior include 2S, 3S, 17, 26, and 27. These parcels typically have relatively flatter topography, which results in less severe fire behavior.

Due to the remote nature of many of the parcels, the likelihood of ignition is generally low (see Table 3.8-4). This is because likelihood of wildfire is strongly influenced by the wildland-urban interface (WUI) and the presence of infrastructure (e.g., roads and highways). Thus, parcels near or within the WUI and infrastructure generally display higher likelihoods of ignition. Parcels with a higher likelihood of ignition include 8, 21, 34, 35, 36, 38, 43, 44, 51M, and 52M.

Most of the parcels have not been impacted by recent wildfire. Only two of the BLM parcels, 6 and 38, have been impacted by recent fire; however, four of the parcels (11, 38S, 39, and 48)

[13] ROS: The ROS is in chains per hour and is defined as the speed at which the fire is moving away from the site of origin. Wind, moisture, and slope drive ROS. The flaming zone, or fire head, moves away from the origin quickly with great intensity (National Wildfire Coordination Group 2022).

[14] Flame length: The flame length is the distance between the flame tip and the midpoint of the flame depth at the base of the flame. Flame length is an observable, measurable indicator of fireline intensity (National Wildfire Coordination Group 2022).

were within 1 mile of recent wildfires. Parcel 6 has been impacted by two recent fires: the Concrete Fire of 2004 and the Dump Fire of 2012. The Concrete Fire burned 545 acres and impacted 64% (110 acres) of parcel 6. The Dump Fire burned 5,502 acres and impacted 39% (67 acres) of parcel 6. Parcel 11 was near the Milford Flat Fire of 2017, which burned 356,664 acres. This fire did not impact any land in parcel 11. Parcel 38 was impacted by the McIntyre Ranch Fire of 2012. This fire burned 118 acres and impacted 0.63% (114 acres) of parcel 38. The McIntyre Ranch Fire also occurred near parcels 38S and 39, but it did not impact any land within these parcels. Parcel 48 was near the Springs Fire of 2006, which burned 437 acres. This fire did not impact any land within parcel 48.

Table 3.8-1. Fuel Model Acreage Breakdown for BLM Parcels

Parcels	% GR	% GS	% SH	% TU	% TL	% NB	Total Acres
2S	2.0	94.9	0.0	0.3	2.4	0.4	768.2
3S	1.2	87.5	0.8	5.5	5.0	0.0	240.4
6	61.2	17.2	20.9	0.0	0.0	0.7	172.9
8	10.6	5.4	83.4	0.0	0.0	0.6	931.5
9	5.7	85.3	9.0	0.0	0.0	0.0	443.2
10	5.0	75.9	19.1	0.0	0.0	0.0	320.6
11	1.8	92.4	4.2	0.0	0.0	1.6	1,295.5
12	3.5	42.2	53.3	0.0	0.0	1.0	644.1
13	0	39.6	60.4	0.0	0.0	0.0	324.0
15	<0.1	10.3	82.9	3.6	1.6	1.6	61.5
17	0.9	8.0	50.9	39.0	1.2	0.0	294.2
21	5.8	50.0	41.6	<0.1	1.4	1.2	360.4
23	46.5	6.6	43.4	0.0	0.1	3.4	643.3
24	53.4	16.9	29.5	0.0	0.1	0.1	895.3
25	37.2	27.6	33.7	0.0	0.1	1.4	842.9
26	20.9	32.8	33.8	0.1	0.1	12.3	893.0
27	8.2	16.7	57.1	0.0	0.0	18.0	120.8
28	60.7	0.9	30.2	0.0	0.0	8.2	4,920.1
29	69.9	0.1	27.5	0.0	0.0	2.5	240.9
30	85.5	0.4	13.9	0.0	0.0	0.2	637.6
33	74.3	0.2	4.9	0.0	0.0	20.6	328.9
34	0.3	78.3	20.8	<0.1	0.6	0.0	1,058.5
35	48.8	44.3	6.0	0.3	0.0	0.6	2,391.8
35M	7.3	70.2	22.3	0.2	0.0	0.0	371.1
36	23.5	50.3	19.8	1.0	5.4	0.0	4,121.5
37	<0.1	81.2	16.5	0.3	2.0	0.0	638.7
38	57.4	28.3	13.5	0.4	<0.1	0.4	17,986.3
38M	28.2	34.4	33.6	1.1	0.0	2.7	363.8
38S	63.2	22.4	13.0	0.6	0.0	0.8	682.1
39	44.5	25.2	30.2	0.0	0.1	0.0	2,972.5
39S	14.9	42.9	38.1	1.6	0.0	2.5	655.3
40	19.9	30.0	50.1	0.0	0.0	0.0	1,336.1

Parcels	% GR	% GS	% SH	% TU	% TL	% NB	Total Acres
41	0.8	42.7	53.7	0.0	0.0	2.8	2,691.7
42	0.1	73.9	25.7	0.2	0.1	<0.1	2,915.6
43	<0.1	33.6	57.9	2.2	6.3	0.0	1,121.3
44	0.0	21.0	60.8	5.9	12.3	0.0	301.1
46	5.3	39.6	46.9	0.0	5.4	2.8	1281.3
46C	0.0	46.9	50.4	0.0	2.7	0.0	118.7
47	7.6	72.9	14.0	0.0	2.7	2.8	874.4
48	0.3	50.7	43.8	0.0	4.4	0.8	1,895.5
49	53.1	23.3	19.4	0.0	0.0	4.2	1,279.2
50	91.5	1.5	6.3	0.0	0.0	0.7	897.2
51M	5.1	54.7	22.2	0.0	0.1	17.9	481.1
52M	1.7	49.4	38.3	0.0	0.0	10.6	3,215.1
53OG	17.9	69.1	2.3	0.0	0.1	10.6	480.9
54	55.8	25.6	8.5	0.0	0.0	10.1	5,756.5
Total	**35.5**	**36.0**	**24.3**	**0.5**	**0.8**	**2.9**	**71,266.6**

Table 3.8-2. Modeled Flame Length Acreage Breakdown for BLM Parcels

Parcels	% 0–4 feet	% 4–8 feet	% 8–11 feet	% >11 feet	Total Acres
2S	9.6	90.4	0.0	0.0	768.2
3S	29.2	70.8	0.0	0.0	240.4
6	10.4	9.6	38.9	41.1	172.9
8	0.6	10.8	15.5	73.1	930.9
9	5.0	87.8	7.2	0.0	443.2
10	1.6	95.0	3.4	0.0	320.6
11	2.5	93.9	3.4	0.2	1,295.5
12	2.1	90.0	2.4	5.5	644.1
13	0.0	86.3	0.0	13.7	324.0
15	12.2	18.0	0.0	69.8	61.5
17	42.6	5.9	0.1	51.4	294.2
21	2.8	26.5	19.3	51.4	360.4
23	46.8	47.1	4.7	1.4	643.3
24	52.8	43.7	2.7	0.8	895.3
25	39.0	58.4	2.2	0.4	842.9
26	71.9	11.9	3.4	12.8	893.0
27	24.4	65.7	3.2	6.7	120.8
28	68.6	30.8	0.5	0.1	4,920.1
29	72.4	27.6	0.0	0.0	240.9
30	85.6	13.7	0.3	0.4	637.6
33	94.9	5.1	0.0	0.0	328.9
34	0.6	8.0	2.0	89.4	1,058.5
35	1.0	6.5	54.5	38.0	2,391.9
35M	0.2	0.4	56.0	43.4	371.1

Parcels	% 0–4 feet	% 4–8 feet	% 8–11 feet	% >11 feet	Total Acres
36	6.2	15.4	21.4	57.0	4,121.5
37	1.5	1.1	0.6	96.8	638.7
38	2.1	10.9	59.6	27.4	17,986.3
38M	23.2	49.1	14.9	12.8	363.8
38S	5.6	19.4	59.0	16.0	682.1
39	1.5	8.7	51.4	38.4	2,972.5
39S	4.5	22.3	43.6	29.6	655.3
40	0.7	66.7	21.0	11.6	1,336.1
41	3.4	92.3	0.8	3.5	2,691.7
42	0.3	8.2	2.3	89.2	2,915.6
43	8.0	2.2	1.5	88.3	1,121.3
44	14.1	1.5	1.3	83.1	301.1
46	12.7	5.5	13.2	68.6	1,281.3
46C	2.0	0.0	30.3	67.7	118.7
47	10.2	18.1	7.2	64.5	874.4
48	3.7	12.5	6.4	77.4	1,895.5
49	76.6	23.4	0.0	0.0	1,279.2
50	92.0	7.7	0.2	0.1	897.2
51M	21.5	70.1	7.8	0.6	481.1
52M	12.2	81.0	5.4	1.4	3,215.1
53OG	21.3	45.3	32.6	0.8	481.0
54	65.8	34.1	0.1	0.0	5,756.5
Total	**19.9**	**28.2**	**24.0**	**27.9**	**71,266.2**

Table 3.8-3. Modeled Rate of Spread Acreage Breakdown for BLM Parcels

Parcels	% 0–5 chains/hour	% 5–20 chains/hour	% 20–50 chains/hour	% >50 chains/hour	Total Acres
2S	3.1	96.5	0.4	0.0	768.2
3S	11.0	88.7	0.3	0.0	240.4
6	0.7	0.8	10.3	88.2	172.9
8	0.6	7.6	3.1	88.7	931.5
9	0.0	3.0	89.8	7.2	443.2
10	0.0	6.4	90.2	3.4	320.6
11	1.5	2.4	92.6	3.5	1,295.5
12	1.0	6.4	84.8	7.8	644.2
13	0.0	44.9	41.4	13.7	324.0
15	7.8	57.4	34.8	0.0	61.5
17	36.2	34.3	23.5	6.0	294.3
21	2.3	0.3	30.9	66.5	360.4
23	3.5	30.2	60.2	6.1	643.3
24	0.1	21.9	74.3	3.7	895.2
25	1.5	28.8	67.0	2.7	842.9
26	26.5	57.6	14.2	1.7	893.0
27	18.0	43.0	27.7	11.3	120.8
28	8.2	27.7	63.4	0.7	4,920.1
29	2.5	27.3	70.2	0.0	240.9

Parcels	% 0–5 chains/hour	% 5–20 chains/hour	% 20–50 chains/hour	% >50 chains/hour	Total Acres
30	0.2	13.0	86.1	0.7	637.6
33	20.6	4.9	74.5	0.0	328.9
34	0.6	1.1	7.3	91.0	1,058.5
35	1.0	0.1	6.4	92.5	2,391.8
35M	0.2	0.0	0.4	99.4	371.1
36	6.0	3.3	5.7	85.0	4,121.5
37	1.5	1.0	0.8	96.7	638.7
38	0.8	0.3	11.8	87.1	17,986.3
38M	3.8	5.9	62.6	27.7	363.8
38S	1.4	0.8	22.6	75.2	682.1
39	0.0	1.8	8.5	89.7	2,972.5
39S	4.2	1.9	20.7	73.2	655.3
40	0.0	10.2	56.1	33.7	1,336.1
41	2.9	2.1	90.7	4.3	2,691.7
42	0.2	2.0	8.1	89.7	2,915.7
43	8.0	0.1	8.5	83.4	1,121.3
44	14.1	0.9	8.0	77.0	301.1
46	7.8	0.3	10.1	81.8	1,281.3
46C	2.0	0.0	0.6	97.4	118.7
47	3.5	0.7	24.6	71.2	874.4
48	3.5	0.1	14.1	82.3	1,895.5
49	4.2	19.4	76.4	0.0	1,279.2
50	0.7	5.3	93.8	0.2	897.2
51M	17.9	11.4	62.3	8.4	481.1
52M	10.6	26.3	56.3	6.8	3,215.1
53OG	10.6	1.2	54.0	34.2	480.9
54	10.1	8.5	81.3	0.1	5,756.5
Total	**4.2**	**9.0**	**35.1**	**51.7**	**71,266.8**

Table 3.8-4. Modeled Likelihood of Ignitions Acreage Breakdown for BLM Parcels

Parcels	% Very Very Low	% Very Low	% Low	% Low–Moderate	% Moderate	% Moderate–High	% High	Total
2S	48.6	27.9	14.3	9.2	0.0	0.0	0.0	765.3
3S	0.0	40.4	33.2	25.3	1.2	0.0	0.0	240.4
6	0.0	0.0	0.0	2.9	56.9	40.2	0.0	171.7
8	0.0	24.4	14.3	27.7	24.1	9.5	0.0	926.2
9	0.0	100.0	0.0	0.0	0.0	0.0	0.0	443.2
10	0.0	100.0	0.0	0.0	0.0	0.0	0.0	320.6
11	88.0	12.0	0.0	0.0	0.0	0.0	0.0	1,275.4
12	99.4	0.6	0.0	0.0	0.0	0.0	0.0	637.9
13	0.0	17.2	33.1	36.2	13.5	0.0	0.0	324.0
15	0.0	0.0	0.0	23.2	73.3	3.5	0.0	60.5
17	0.0	0.0	0.0	57.9	27.2	14.9	0.0	294.2
21	0.0	1.3	10.0	25.1	25.9	30.5	7.2	356.1
23	0.0	11.9	84.9	3.2	0.0	0.0	0.0	621.0
24	0.0	0.3	92.2	7.5	0.0	0.0	0.0	894.4
25	9.8	65.7	19.6	4.9	0.0	0.0	0.0	831.1
26	70.5	29.5	0.0	0.0	0.0	0.0	0.0	782.9
27	0.0	0.2	99.8	0.0	0.0	0.0	0.0	99.1
28	78.3	21.7	0.0	0.0	0.0	0.0	0.0	4,518.2
29	33.3	66.7	0.0	0.0	0.0	0.0	0.0	234.9
30	26.2	73.8	0.0	0.0	0.0	0.0	0.0	636.4
33	0.6	5.1	11.3	23.5	59.6	0.0	0.0	261.2
34	0.0	0.0	1.5	22.2	34.8	33.6	7.9	1,058.5
35	0.0	36.7	13.0	12.9	13.4	21.3	2.8	2,377.2
35M	0.0	0.0	22.8	54.3	22.5	0.5	0.0	371.1
36	0.0	67.2	10.6	8.6	8.5	5.1	0.0	4,121.5
37	0.0	80.8	14.1	5.1	0.0	0.0	0.0	638.7
38	6.8	62.0	10.8	10.5	8.7	1.3	0.0	17,914.3
38M	0.3	99.7	0.0	0.0	0.0	0.0	0.0	354.1
38S	10.7	65.9	6.2	8.2	8.9	0.0	0.0	676.5
39	3.5	83.7	6.6	5.9	0.3	0.0	0.0	2,972.5
39S	71.4	22.7	5.4	0.5	0.0	0.0	0.0	638.8
40	2.8	97.2	0.0	0.0	0.0	0.0	0.0	1,336.1
41	34.2	65.8	0.0	0.0	0.0	0.0	0.0	2,614.7
42	8.7	66.6	4.5	6.0	13.6	0.6	0.0	2,915.6
43	0.0	47.7	12.9	8.4	12.0	18.9	0.0	1,121.3

Parcels	% Very Very Low	% Very Low	% Low	% Low–Moderate	% Moderate	% Moderate–High	% High	Total
44	0.0	0.5	9.8	27.5	28.2	34.0	0.0	301.1
46	10.8	89.2	0.0	0.0	0.0	0.0	0.0	1,246.0
46C	0.0	100.0	0.0	0.0	0.0	0.0	0.0	118.7
47	10.4	46.5	25.0	17.7	0.4	0.0	0.0	849.9
48	0.0	13.7	25.0	29.9	31.4	0.0	0.0	1,880.8
49	58.7	37.6	3.7	0.0	0.0	0.0	0.0	1,226.0
50	0.7	68.2	12.4	7.6	11.1	0.0	0.0	890.9
51M	0.0	0.0	0.0	0.2	33.8	66.1	0.0	394.8
52M	0.0	0.0	0.0	1.3	38.1	60.6	0.0	2,874.8
53OG	0.0	100.0	0.0	0.0	0.0	0.0	0.0	430.0
54	93.6	6.4	0.0	0.0	0.0	0.0	0.0	5,175.4
Total	**22.2**	**46.1**	**9.2**	**7.8**	**8.7**	**5.7**	**0.3**	**69,194.0**

Note: Total does not match other tables because portions of the parcels are considered non-burnable.
Likelihood (probability) of Ignition: Very Very Low = 0.022–0.036, Very Low = 0.04–0.04, Low = 0.04–0.07, Low–Moderate = 0.07–0.11, Moderate = 0.11–0.17, Moderate–High = 0.17–0.27, High = 0.27–0.40.

3.8.1.1.2 SITLA Parcels

SITLA parcels that could have their wildland fire environment and/or fuels management impacted by future land use changes consist of parcels with future fuels treatments: SE101, SE102, SE103, SE158B, SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, and SE297B. Due to the wide geographic area that the SITLA parcels cover, their fuels and fire behavior vary considerably (Tables 3.8-5 to 3.8-9). Parcels that display more extreme fire behavior include SE101, SE102, SE103, and SE284B due to their complex terrain and grass-shrub and shrub fuels (see Tables 3.8-5 to 3.8-8). Parcels that display more moderate fire behavior include SE158B, SE279B, and SE291B. SE158B is located in relatively flat terrain, which moderates its fire behavior. SE279B and SE291B, however, occur in more complex topography, but have substantial portions of non-burnable areas (rock outcrops and cliffs). The parcels that display more mild fire behavior include SE160B, SE280B, SE283B, SE284B, SE287B, SE288B, SE292B, SE293B, SE296B, and SE297B. These parcels are primarily composed of non-burnable fuels (see Table 3.8-5).

The likelihood of ignition is no greater than low (Table 3.8-9). This is due to both the remote nature of the parcels and the large degree of non-burnable fuels that they exhibit. None of the SITLA parcels have been impacted by recent wildfire.

Table 3.8-5. Modeled Fuel Acreage Breakdown for SITLA Parcels

Parcels	% GR	% GS	% SH	% TL	% NB	Total Acres
SE101	7.6	91.1	1.1	0.1	0.0	157.7
SE102	2.9	64.2	21.3	11.6	0.0	638.6
SE103	3.0	29.0	47.0	20.0	1.1	629.6
SE158B	22.9	30.4	46.7	0.0	0.0	23.3
SE160B	0.0	9.8	3.4	0.0	86.8	6.5
SE279B	28.3	4.7	39.4	0.0	27.7	78.6
SE280B	18.8	5.8	5.7	0.0	69.7	75.8
SE283B	12.3	6.1	4.9	0.0	76.6	72.6
SE284B	17.5	62.3	15.6	0.0	4.6	74.7
SE287B	48.0	7.8	6.4	0.0	37.8	76.3
SE288B	16.2	3.7	5.4	0.0	74.7	85.3
SE291B	29.0	16.1	10.7	0.0	44.2	89.8
SE292B	85.3	1.5	3.9	0.0	9.4	99.7
SE293B	31.9	10.5	50.7	0.0	6.8	79.9
SE296B	11.6	1.1	3.7	0.0	83.6	81.6
SE297B	28.2	9.9	22.1	0.0	39.8	79.0
Total	**14.1**	**36.0**	**24.6**	**8.5**	**16.3**	**2,349.0**

Table 3.8-6. Modeled Flame Length Acreage Breakdown for SITLA Parcels

Parcels	% 0–4 feet	% 4–8 feet	% 8–11 feet	% > 11 feet	Total Acres
SE101	7.3	51.6	32.6	8.5	157.7
SE102	12.4	12.8	37.5	37.3	638.6
SE103	12.0	2.6	4.6	80.8	629.6

Parcels	% 0–4 feet	% 4–8 feet	% 8–11 feet	% > 11 feet	Total Acres
SE158B	9.6	68.7	21.7	0.0	25.8
SE160B	86.7	13.3	0.0	0.0	6.5
SE279B	53.4	42.6	2.6	1.4	78.6
SE280B	87.1	8.8	1.6	2.5	75.8
SE283B	90.2	5.3	0.0	4.6	72.6
SE284B	22.5	62.9	1.2	13.4	74.7
SE287B	85.8	14.1	0.1	0.0	76.3
SE288B	90.5	9.0	0.5	0.0	85.3
SE291B	73.0	17.8	0.6	8.7	89.8
SE292B	94.7	2.2	1.2	2.0	99.7
SE293B	37.7	61.0	1.4	0.0	79.9
SE296B	94.6	4.5	0.6	0.3	81.6
SE297B	67.3	25.7	2.5	4.5	79.0
Total	**35.2**	**16.9**	**14.3**	**33.6**	**2,351.5**

Table 3.8-7. Modeled Rate of Spread Acreage Breakdown for SITLA Parcels

Parcels	% 0–5 chains/hour	% 5–20 chains/hour	% 20–50 chains/hour	% > 50 chains/hour	Total Acres
SE101	0.6	0.7	56.2	43.1	157.7
SE102	11.1	0.8	12.1	76.1	638.6
SE103	11.1	0.1	2.5	86.4	629.6
SE158B	9.6	37.8	30.9	21.7	25.8
SE160B	86.7	3.4	9.7	0.0	6.5
SE279B	27.7	20.6	47.7	4.0	78.6
SE280B	69.7	2.8	22.8	4.7	75.8
SE283B	76.6	1.6	17.3	4.6	72.6
SE284B	4.6	11.7	68.5	15.2	74.7
SE287B	37.8	3.1	59.0	0.1	76.3
SE288B	74.7	4.1	20.6	0.5	85.3
SE291B	44.2	1.2	45.2	9.3	89.8
SE292B	9.4	1.8	85.7	3.2	99.7
SE293B	6.8	36.6	55.2	1.4	79.9
SE296B	83.6	1.7	13.8	0.9	81.6
SE297B	39.8	9.1	43.4	7.6	79.0
Total	**22.5**	**3.9**	**25.0**	**48.7**	**2,351.5**

Table 3.8-8. Modeled Likelihood of Ignitions Acreage Breakdown for SITLA Parcels

Parcels	% Very Very Low	% Very Low	% Low	Total Acres
SE101	0.0	94.2	5.8	157.7
SE102	0.0	100.0	0.0	638.6

Parcels	% Very Very Low	% Very Low	% Low	Total Acres
SE103	0.0	100.0	0.0	622.7
SE158B	71.8	28.2	0.0	23.4
SE160B	100.0	0.0	0.0	0.9
SE279B	60.8	39.2	0.0	56.9
SE280B	100.0	0.0	0.0	23.0
SE283B	100.0	0.0	0.0	17.0
SE284B	0.0	99.0	1.0	71.2
SE287B	7.6	92.4	0.0	47.5
SE288B	100.0	0.0	0.0	21.6
SE291B	100.0	0.0	0.0	50.1
SE292B	64.7	35.3	0.0	90.3
SE293B	0.0	100.0	0.0	74.5
SE296B	100.0	0.0	0.0	13.4
SE297B	100.0	0.0	0.0	47.6
Total	**14.7**	**84.8**	**0.5**	**1,956.4**

Note: Total does not match other tables because portions of many of the parcels are considered non-burnable.
Likelihood (probability) of Ignition: Very Very Low = 0.022–0.036, Very Low = 0.04–0.04, Low = 0.04–0.07.

3.8.1.2 Management Framework

National interagency wildland fire policy, including the 2009 Guidance for Implementation of Federal Wildland Fire Management Policy (Fire Executive Council 2009) and the National Cohesive Wildland Fire Management Strategy (Wildland Fire Leadership Council 2014), provides high-level interagency standards for all local, state, and federal land management agencies in wildfire activities. BLM RMPs provide overarching guidance and evaluation of resources and resource use management on public land, including fire and fuels management. Fire management activities on BLM public land in some Utah FOs, with the exception of the Warm Springs and House Range Resource Management Plans, are further directed by the *Utah Land Use Plan Amendment for Fire and Fuels Management* (BLM 2005) and the Salt Lake District Fire Management Plan Amendment (BLM 1998c). The overall goals of wildfire management under this plan include firefighter and public safety, collaborative risk reduction in the WUI, and allowing fire to function in its ecological role where appropriate. FOs may also have amended their RMPs through subsequent planning. In addition, the BLM has Fire Management Plans, usually at the district or field office level, that provide more detailed guidance for fire management.

On private and state-owned lands, the Utah Division of Forestry, Fire and State Lands (UDFFSL) manages fire and fuels as directed by Utah Code 65A-8-2 (Title 65A – Forestry, Fire, and State Lands, Chapter 8 – Management of Forest Lands and Fire Control, Part 2 – Fire Control). Wildfire response is coordinated through county wardens. UDFFSL is also responsible for coordinating fuels reduction and wildfire resiliency projects across state and private lands; these can include directly carrying out projects or funding projects at local levels (UDFFSL 2022).

Fire response in Utah is provided by multiple agencies under mutual aid and cooperative agreements (BLM 2005, 2022a). The Utah Statewide Operating Plan of 2013 (updated in 2016)

is an agreement for interagency cooperation for fire management between federal partners and UDFFSL. Fire response is coordinated and dispatched through interagency fire centers. The capabilities and availability of local resources to respond to wildfire vary due to staffing levels and availability, access to appropriate equipment, and response times and distances to fire ignitions.

3.8.2 Proposed Action

Changes in land use and management due to reasonably foreseeable land actions that could occur after the land exchange have the potential to impact the fire environment for both BLM and SITLA parcels (Table 3.8-10); however, as noted in Section 3.8.1.2, the land exchange would not alter current interagency coordination for response and suppression efforts. Fire response would still be coordinated by the parcel's current interagency dispatch center. Additionally, the BLM would maintain access through public lands by issuing a perpetual road ROW on BLM parcels transferred to SITLA (see Table 3.10-1).

Table 3.8-9. Reasonably Foreseeable Future Land Uses and Impacts to BLM and SITLA Parcels

Parcel	Reasonably Foreseeable Future Land Use	Impact
2S	Grazing	Past fuels treatments on this parcel include the Desert No. 1 and Murphy Ridge fuel reduction projects, which occurred from 2002 to 2004. Future fuel projects could cease or resume depending on SITLA land management decisions.
3S	Grazing	Past fuels treatments on this parcel include the Home Ranch and Mecham Canyon Projects, which occurred in the years 2004 to 2006, 2011, 2015, and 2019 to 2020. Future fuel projects could cease or resume depending on SITLA land management decisions.
6 and 15	Residential development	Parcel 6 has had past fuel treatments, which include the Lake Mountain Reformation Canyon thinning and seeding project of 2002. The foreseeable land use would change fuel characteristics in the residential development to include more non-burnable area (e.g. roads) and fuels characterized by landscaped vegetation. The foreseeable future land use would not change fuel characteristics for land outside the residential development; however, increased human presence could result in increased wildfire ignition potential (development and ignition potential are correlated). Parcel 6 has potential for hazardous fire behavior, due to its high rates of spread. An increased ignition potential would increase the risk of fast-moving fires around the residential development and the parcel. Parcel 15 has potential for extreme fire behavior, particularly high flame lengths. An increased ignition potential would increase the risk of fires around the residential development and the parcel that could be difficult to suppress.
8–13, 23–25, and 33	Solar development	Currently, parcel 8 has potential for extreme fire behavior. The foreseeable land use would increase ignition potential due to increased industrial use, as well as increase the loading of fine fuels from invasive and/or weeds due to ground disturbance that could facilitate ground fire spread. However, a large portion of the landscape would transition to non-burnable fuels, which would decrease wildfire risk.

Parcel	Reasonably Foreseeable Future Land Use	Impact
17 and 26	Recreation development	These parcels are anticipated to be developed into outdoor recreational areas (e.g., resort development, car camping, glamping). The increase in human presence would likely increase the wildfire ignition likelihood, whereas changes in land use would likely increase fine fuel loading (e.g., invasive introduction or creation in disturbed areas). This would increase the wildfire risk in these parcels.
34–44, 46, 35M, 38M, 38S, 39S, 49, 50, 51M, and 52M	Mining operations	Currently, parcels 34–40, 35M, 38M, 39S, 42–44, and 52M have potential for extreme fire behavior. The foreseeable land use would increase ignition potential due to increased industrial use. Additionally, there could be an increase in the loading of fine fuels due to ground disturbance, which could facilitate wildfire spread. Conversely, these activities could create patches void of vegetation (i.e., non-burnable fuels), which could decrease wildfire risk.
21	Grazing	Some of the pinyon-juniper stands in this parcel were masticated between 2017 and 2019. The untreated areas of this parcel have the potential for extreme fire behavior. Future fuel projects could cease or resume depending on SITLA land management decisions.
27–30	Industrial development (general)	Currently, these parcels do not exhibit potential for extreme fire behavior, but future land use changes could alter fuel characteristics and heighten wildfire risk. The foreseeable land use would increase ignition potential due to increased industrial use. Additionally, there could be an increase in the loading of fine fuels due ground disturbance, which could facilitate wildfire spread.
53OG and 54	Proposed oil and gas and helium operations	Parcel 54 does not currently exhibit potential for extreme fire behavior, but future land use changes could alter fuel characteristics and heighten wildfire risk. Parcel 53OG does exhibit potential for extreme fire behavior. The foreseeable land uses would increase ignition potential due to increased industrial use. Additionally, there could be an increase in the loading of fine fuels due ground disturbance, which could facilitate wildfire spread.
46–48, 46C	Underground coal mining operations	Currently all of these parcels display potential for extreme wildfire behavior with various fuel types ranging from grass, shrub, and timber. The current trend of mortality within the conifer species along the Book Cliffs due to drought and insect infestation has increased the fire severity. The foreseeable land use would increase ignition potential due to increased industrial use. Soil disturbance caused by mining activities could also increase the establishment and spread of fine fuels, which could result in faster rates of wildfire spread.
SE101 to SE103	Recreation, existing encumbrances for grazing, land use authorizations, and mineral leases	The Six Mile Slashing Project was completed on these parcels in 2014 and have maintenance fuels treatments planned. Future fuel projects could cease or resume depending on BLM land management decisions.

Parcel	Reasonably Foreseeable Future Land Use	Impact
SE158B, part of SE160B, SE279B, SE280B, SE283B, SE284B, SE287B, SE288B, SE291B, SE292B, SE293B, SE296B, and SE297B	Recreation, existing encumbrances for grazing, land use authorizations, and mineral leases	There are no current fuel treatments int these parcels. Future fuel projects could commence depending on BLM land management decisions.

3.8.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to fire and fuels management due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.8.4 Cumulative Impacts) could result in impacts in the fuels and fire analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. The continuation of the federal coal leasing moratorium would likely benefit fire and fuels management in the short term, as reclamation of BLM parcels 46–50 and 46C could decrease ignition potential and soil disturbance-related increase in fine fuels caused by mining activities. However, future land uses after reclamation is complete could reintroduce wildfire risk if they change fuel characteristics.

3.8.4 Cumulative Impacts

Based on estimated reasonably foreseeable residential development, energy generation, pipeline, transmission, telecommunication, recreation, and road construction project footprints listed in Table 3.1-3, future construction or operational activities near the BLM, SITLA, or equalization parcels could be implemented on approximately 232,405 acres of land (excluding actions already in operation or in effect). These activities could have a temporary to long-term impact to fire and fuels management if future actions result in changes to ignition potential or cause soils and landscape disturbance that affect fuel loads. Of this total, however, only an estimated 13,480 acres (6%) of future disturbance would directly overlap or intersect land exchange parcels. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment. Fire response, fuels reduction, and wildfire resiliency projects would continue to be managed per the Utah Statewide Operating Plan of 2013 (updated in 2016) (UDFFSL 2016) and BLM Fire Management Plans.

Reasonably foreseeable future land actions on BLM parcels that could occur after the land exchange would add up to an additional 69,976 acres of surface or sub-surface disturbance, which could further increase hazardous wildfire conditions due to changing fuel conditions and

increased in wildland ignition potential based on increased human presence. For context, however, the combined disturbance associated with land exchange future actions and other reasonably foreseeable development would affect less than 1% of BLM-administered lands in the 18-county land exchange. Additionally, current interagency coordination for response and suppression efforts would not be impacted, and access to public roads for fire and fuels activities would be maintained. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur to fire response and fire suppression.

3.9 Geology, Mineral Resources, and Energy Production

Geology, mineral, and energy resources include mineral entry; sand and gravel mining activities; oil and gas leasing; oil, gas, and geothermal resources; hard-rock mineral exploration in a historic mining district; various coal resources; and known base and precious metal mineral or industrial mineral resources.

3.9.1 Affected Environment

The *geology, minerals, and energy analysis area* contains 35 mapped geological units, of which five account for nearly 60% of all lands within affected parcels: Salt Lake Formation and valley-filling alluvial, lacustrine, and volcanic materials; Moenkopi, Dinwoody, Woodside, Thaynes, and other formations; Summerville, Entrada, Carmel, Arapien, Twin Creek, and other formations; Glen Canyon Group (Navajo, Kayenta, Wingate, and Moenave Formations) and Nugget Sandstone; and Wasatch, Cotton, Flagstaff, Claron, White Sage, and other formations.

A mineral resources evaluation for the land exchange was completed in July 2020 by the Utah Geological Survey (UGS) (Rupke et al. 2020). The evaluation identified mineral potential for clay, crushed stone, fluorspar, gypsum, high-calcium limestone, high-magnesium dolomite, humate, phosphate, potash, sand and gravel, silica and industrial sand, metals, uranium, coal, and oil sand. Moderate and high development potential, however, are limited to crushed stone, gypsum, sand and gravel, metals, uranium, and coal. Crushed stone development potential is present in parcels that are relatively close to population centers (mostly along the Wasatch Front) or near past extraction sites. Similarly, sand and gravel development is likely where potential resources occur along major roads, near population centers, or on sites.

Mineral resources evaluation findings are summarized in Table 3.9-1.

Table 3.9-1. Mineral Resources Evaluation Findings

Commodity	Occurrence Potential (number of parcels)			Development Potential (number of parcels)	
	High	Moderate	Low	High	Moderate
SITLA parcels					
Clay	–	31	100	–	–
Crushed stone	1	38	50	–	–
Fluorspar*	–	–	–	–	–
Gypsum	4	12	46	–	1
Limestone and dolomite	1	–	2	–	–
Humate	2	–	11	–	–
Phosphate	–	–	4	–	–

Commodity	Occurrence Potential (number of parcels)			Development Potential (number of parcels)	
	High	**Moderate**	**Low**	**High**	**Moderate**
Potash	–	1	8	–	–
Sand and gravel	–	8	35	–	–
Silica and industrial sand	7	16	79	–	–
Metals	–	–	2	–	–
Uranium	–	9	23	–	–
Coal	1	4	17	–	–
Oil sand	2	1	26	–	–
Total	*18*	*120*	*403*	*0*	*1*
BLM parcels					
Clay	–	43	142	–	–
Crushed stone	13	9	10	–	4
Fluorspar*	–	2	4	–	–
Gypsum	–	1	11	–	–
Limestone and dolomite	3	1	14	–	–
Humate	5	7	18	–	–
Phosphate	–	–	2	–	–
Potash	–	2	6	–	–
Sand and gravel	9	65	123	4	25
Silica and industrial sand	–	10	19	–	–
Metals	14	36	74	20	23
Uranium	2	9	5	–	11
Coal	21	7	2	17	2
Oil sand	2	1	–	–	–
Total	*69*	*193*	*430*	*41*	*65*

Source: Rupke et al. (2020). This report was prepared prior to preparation of the EA and does not reflect parcels that have been removed over time by mutual agreement between the BLM and SITLA.

* Critical mineral.

In response to the Energy Act of 2020's directive to update the list of critical minerals, the U.S. Geological Survey (USGS) released the 2022 list of critical minerals (USGS 2023a). Critical minerals are defined as non-fuel minerals or mineral materials that have a supply chain vulnerable to disruption and are essential to U.S. economic or national security. According to the USGS interactive map (USGS 2023b), no critical minerals are found within the parcels; however, beryllium, fluorite (fluorspar), and vanadium could occur within 3.5 miles of certain parcels. According to the mineral resources evaluation prepared for this land exchange (see Table 3.9-1) fluorite (fluorspar) has a moderate likelihood of occurrence in two parcels and a low likelihood of occurrence in four parcels.

3.9.1.1 Parcel-Specific Conditions

BLM parcels are situated within seven mining districts (Table 3.9-2). A total of 17 BLM parcels (12, 17, 28, 34, 35, 35M, 36, 37, 38, 38S, 39, 39S, 40, 41, 42, 43, and 44) are encumbered by

1,298 active mining claims held by 25 claimants, as detailed in Appendix A. Other existing encumbrances on BLM parcels include

- sand and gravel permits (parcels 2 and 26);
- a withdrawal to protect oil shale resources (parcel 21);
- a free use permit for Ferron Canal and Reservoir Company (parcel 26), Hadden Flat (parcel 23), and Uintah County (53M);
- gold and copper mining (parcels 40 and 42, respectively; additional parcels with pending claims);
- coal exploration (parcel 46; with additional coal mining leases pending in parcels 46–50 and 46C); and
- pending permit for sodium exploration (parcels 51M and 52M).

Although not currently under production, the Beryl and Milford Flat parcels (parcels 9–13) are prospectively valuable for oil, gas, and geothermal resources. The geology, minerals, and energy analysis area also contains three coal fields: Wasatch Plateau, Book Cliffs, and Emery. Coal resources are present on portions of BLM parcels 23, 24, 25, 26, and 27, with some areas mapped as having coal seams in excess of 4 feet thick. Oil and gas leases also occur on BLM parcels 23, 24, 25, 27, and 54. Parcel 41 is approximately 1.5 miles from a source of the critical minerals beryllium and fluorite (fluorspar) (USGS 2023b).

SITLA parcels are situated within 10 mining districts (see Table 3.9-2). As shown in Appendix A, seven SITLA parcels (SE108–SE110, SE154, SE156, and SE157A and B) are encumbered by six active mineral leases held by three claimants. Parcel SE152 is approximately 3.5 miles from a source of the critical mineral vanadium (USGS 2023b).

There is no current mineral leasing or energy production within the six equalization parcels (3C, 3D, 3E, 7A, 7B, and 7C).

Table 3.9-2. Mining Districts within the Geology, Minerals, and Energy Analysis Area

Parcels	FO	County	Mining Districts
15, 17	SLFO	Wasatch/Summit	Park City Mining District
28, 30	PFO	Emery	San Rafael River District
32	MFO	San Juan	Browns Hole-Upper Kane Creek Mining District
34	SLFO	Tooele	Mercur and West Dip Mining District
36, 38, 38M	FFO	Juab	Southwest Tintic Mining District
40	FFO	Juab	Desert Mountain Mining District
41	FFO	Juab	Spor Mountain Mining District
SE154, SE155, SE159	PFO	Emery	Mineral Canyon Mining District
SE161	PFO	Emery	Cedar Mountain Mining District
SE176, SE177, SE178, SE188	PFO	Emery	Calf Mesa Mining District.

Parcels	FO	County	Mining Districts
SE178, SE179, SE191–SE193, SE195–SE200, SE209 SE210, SE216A–C, SE217, SE224A, SE225, SE226, SE227, SE230, SE247, SE251, SE254, SE257, SE270, SE274	PFO	Emery	Special Tar Sand Area
SE200, SE219	PFO	Emery	Spotted Wolf-Greasewood Draw Mining District
SE205, SE206A, SE207, SE208, SE209, SE210, SE225, SE227–SE230, SE247	PFO	Emery	Sinbad Mining District
SE222, SE223, SE226, SE243, SE246, SE247, SE263	PFO	Emery	Tomsich Butte Mining District
SE257, SE258, SE274	PFO	Emery	Temple Mountain Mining District
SE263, SE268, SE277, SE281, SE282	PFO	Emery	Delta Mining District
SE254, SE257, SE269, SE270–SE275, SE281, SE285	PFO	Emery	Wildhorse Mining District

3.9.1.2 Management Framework

FLPMA established the BLM's multiple-use and sustained yield mandate to serve present and future generations, including providing domestic sources of minerals from public lands via implementation of the Mining and Minerals Policy Act of 1970 (84 Statute 1876, 30 USC 21a). The Mining and Minerals Policy Act of 1970 was established to foster and encourage private enterprise in the development of a stable domestic minerals industry and the orderly and economic development of domestic mineral resources. This act expanded upon previous mining legislation, including the Mining Law of 1872, as amended, the Mineral Leasing Act of 1920, and the Mineral Leasing Act for Acquired Lands of 1947. These laws opened and then extended public lands of the United States to the development of varied mineral resources. Relevant federal regulations are also provided in 43 CFR Parts 3000, 3100, 3200, 3400, 3500, 3600, and 3800.

The SITLA 2022-10 Agency Rulebook 37th Edition (SITLA 2022a) define the rules generally governing development activities on the surface and mineral estates administered by the agency. Per this guidance, lessees, permittees, or designated operators are typically required to submit a plan of operations to Utah Division of Oil, Gas and Mining (DOGM), and could also be required to post a bond with DOGM consistent with terms and amounts established in SITLA rules.

The BLM and DOGM also have differing resource and/or regulatory considerations concerning reasonably foreseeable mining activities, as established in 43 CFR Subpart 3809 and Utah Administrative Code R647-3 and 4.

3.9.2 Proposed Action

Table 3.9-3 shows the net federal gain or loss of BLM parcels with occurrence and development potential of mineral commodities after the land exchange is completed. Implementation of the land exchange would decrease potential mineral development and associated revenue on BLM land and increase potential mineral development and associated revenue on SITLA lands, because SITLA would gain more parcels with mineral occurrence or development potential overall. The value contribution of these mineral resources would be determined during the appraisal process, which would be conducted in accordance with nationally recognized appraisal standards, including, as appropriate, the Uniform Appraisal Standards for Federal Land Acquisitions and the Uniform Standards of Professional Appraisal Practice. Because the Dingell Act requires that the land exchange be of equal value, however, the BLM would be compensated for any loss of value associated with mineral resources through acquisition of the SITLA parcels and, if needed, the equalization parcels.

Table 3.9-3. Summary of Net Federal Gain or Loss of BLM Parcels Having Occurrence and Development Potential of Mineral Commodities

Commodity	Occurrence Potential (number of parcels)			Development Potential (number of parcels)	
	High	Moderate	Low	High	Moderate
Clay	0	-12	-42	0	0
Crushed stone	-12	29	40	0	-4
Fluorspar*	0	-2	-4	0	0
Gypsum	4	11	35	0	1
Limestone and dolomite	-2	-1	-12	0	0
Humate	-3	-7	-7	0	0
Phosphate	0	0	2	0	0
Potash	0	-1	2	0	0
Sand and gravel	-9	-57	-88	-4	-25
Silica and industrial sand	7	6	60	0	0
Metals	-14	-36	-72	-20	-23
Uranium	-2	0	18	0	-11
Coal	-20	-3	15	-17	-2
Oil sand	0	0	26	0	0
Total	*-51*	*-73*	*-27*	*-41*	*-64*

Source: Rupke et al. (2020). This report was prepared prior to preparation of the EA and does not reflect parcels that have been removed over time by mutual agreement between the BLM and SITLA.

* Critical mineral.

Table 3.1-1 lists anticipated uses of BLM parcels to be conveyed to SITLA. Reasonably foreseeable residential, recreational, water supply, and industrial development of parcels 6, 15, 17, and 26–30 could reduce the acreage of lands that are available for mineral resource development. Other anticipated future energy development activities could potentially increase mineral resource development on SITLA lands; however, any future mineral and coal activities would be wholly contingent on the confirmation of commercially viable deposits within these

parcels, as well as market conditions, pursuant to state laws, regulations, and policy that apply to SITLA lands.

The conveyance of BLM parcels to SITLA would not impact lease and permit holders in the short term, because all parcels that are encumbered by mineral leases, mining claims, mineral material claims, permits, and geothermal leases would be conveyed with the encumbrance, and access and use of existing operations would continue under the applicable terms of the encumbrance unless a new contractual arrangement was negotiated between the lessee/permittee/claimant and SITLA. Upon renegotiation or future renewal, however, fees, bond amounts, and other plan or reclamation activities could be subject to change per SITLA rules.

Once conveyed to the BLM, SITLA parcels within wilderness areas, NCAs, or the San Rafael Swell Recreation Area would automatically be withdrawn from the mining, mineral leasing, mineral materials, and geothermal leasing laws, subject to valid existing rights. The BLM would administer the six existing mineral leases on the SITLA parcels through the remainder of the current term; however, future use of valid existing rights would be subject to the BLM's rates, policies, and provisions. Although this future change could contribute to a decrease in federal mineral development potential if leases are not renewed indefinitely, the change is anticipated to be minimal due to the low number of mineral leases and limited mineral development potential on these parcels.

Minerals management on other SITLA parcels acquired by the BLM, including parcels in which the BLM would acquire only the associated mineral estate, would be managed similarly to adjacent or surrounding minerals and in accordance with the applicable RMP(s), unless specified otherwise by the Dingell Act.

Mining development would not change within the six equalization parcels because there is no current mineral leasing or energy production activity on those parcels.

3.9.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to geology, mineral resources, and energy production due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.9.4, Cumulative Impacts) could result in impacts in the geology, minerals, and energy analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would eliminate coal leasing on BLM parcels 46–50 and 46C. However, this reduction could be offset by other energy substitutions that occur on these parcels after reclamation is complete (see Section 3.3 for details).

3.9.4 Cumulative Impacts

Cumulative effects on geology, mineral resources, and energy production could occur if other reasonably foreseeable future actions listed in Table 3.1-3 either 1) increase mineral development or energy production in the geology, minerals, and energy analysis area, or 2) introduce other types of development on lands capable of supporting mineral development or energy production, thereby reducing lands that are available for these resources.

As noted in Table 3.1-3, oil and gas development and mineral development is both occurring and anticipated to continue to occur across BLM lands, where permitted. If helium development (near or on parcel 54), geothermal testing (near parcel 9), active BLM oil and gas lease development (parcels 2, 23–25, 27, 53, 53M, 53OG, and 54), coal mining (near parcel 46 and 46C), and hydrogen storage (near parcel 51M and 52M) occur, these actions would further increase energy production and mineral resources on up to 12,758 acres in or near the geology, minerals, and energy analysis area. Conversely, Price and Vernal RMP amendments permanently closed energy and mineral development on approximately 248,000 acres of BLM lands, subject to any valid existing rights at the time of designation in 2019. However, 6,600 acres of wilderness study areas (WSAs) were released from WSA status and could, as part of the land use planning process, be opened to energy and mineral development in the future.

Reasonably foreseeable land actions that could occur after the land exchange could also reduce or increase the acreage of lands that are available for mineral resource development, if implemented. As described in Table 3.1-1, 57,417 acres of BLM parcels have leasing potential for varied minerals, oil and gas, helium, or coal and could be developed upon conveyance to SITLA. Conversely, the remaining 32,297 acres of BLM parcels may be less likely to be developed for mineral resources after conveyance because they are anticipated to be dedicated to other uses, such as recreation, residential, or solar energy development. Overall, however, SITLA would gain more parcels with mineral occurrence or development potential. As also noted in Section 3.9.2, the value contribution of these mineral resources would be determined during the appraisal process. Because the Dingell Act requires that the land exchange be of equal value, the BLM would be compensated for any loss of value associated with mineral resources through acquisition of the SITLA parcels and, if needed, the equalization parcels. Therefore, no appreciable cumulative effects on geology, mineral resources, and energy production are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.10 Lands Access and Realty

This section considers leases, permits, and ROW authorizations to support a wide range of economic activities that require the use, occupancy, and development of BLM or SITLA lands.

3.10.1 Affected Environment

3.10.1.1 Parcel-Specific Conditions

There are currently 68 land use authorizations for ROWs, encumbering 32 of the BLM parcels[15] (see Section 2.1.1 and Appendix A for details). Encumbrances on BLM parcels include federal aid highways; communication infrastructure, including fiber optic, telephone, and telegraph lines and facilities; irrigation and water-related infrastructure; power transmission lines; roads; railroad stations and spur or access roads; and other FLPMA encumbrances. Additionally, public water reserves encumber parcels 1, 36, 38S, and 54.

The BLM has issued road ROWs to itself on existing roads as disclosed in Table 3.10-1 in order to preserve access to adjacent public lands.

[15] This count excludes authorizations associated with mineral resources and livestock grazing. See Sections 3.9 and 3.11 for a discussion of current encumbrances associated with these resources.

Table 3.10-1. BLM Road Rights-of-Way

FO	Parcels	Serial Number	Legal Description	Road Name
PFO	21	UTU-095835	T13S R16E, Section 31	Cedar Ridge Road
PFO	24	UTU-095841	T18S R9E Section 31	Unknown
PFO	26	UTU-095839	T20S R63 Section 12	Ferron Canyon Road
PFO	26	UTU-095840	T20S R63 Section 12	Millsite-Unknown Road
PFO	28, 30	UTU-095842	T21S R14E Sections 13, 14, 22, 23, 27, 34, 35 T21S R14E Section 1	None
MFO	32	UTU-95899	T27S R23E Section 19	D1684 (Behind the Rocks Jeep Safari Route)
MFO	32	UTU-95900	T27S R23E Section 19	B129 Yellow Circle Road (Strike Ravine Jeep Safari Route)
MFO	32	UTU-95901	T27S R23E Sections 19, 30	D0663, D0664 Behind the Rocks Road
MFO	32	UTU-95902	T27S R23E Section 30	B173 Pole Canyon Road (Strike Ravine Jeep Safari Route)
PFO	46	UTU-095845	T16S R14E Section 25	None
PFO	46, 48	UTU-095843	T17S R15E Sections 6, 7	None
PFO	50	UTU-095838	T23S R6E Section 5	Walker Flat
VFO	53	UTU-096154	T5S R19E Sections 10, 11, 13, 14	Lapoint Bench Road
PFO	54	UTU-095837	T25S R13E Sections 10, 11, 13, 14	Temple Springs
SLFO	3, 3S	UTU-095869	T8 North R6 West (W) Sections 12, 23, 26, 34	Unknown
SLFO	6	UTU-095866	T6S R1W Section 4	Unknown
SLFO	34	UTU-095867	T6S R14W Sections 11, 12	Five-Mile Pass
FFO	40	UTU-095792	T12S R6W Sections 5, 6	Road and waterline
FFO	41	UTU-095792	T12S R12W Sections 17, 26, 35, 36	Various roads
FFO	35, 35S, 38, 39	UTU-095792	T10S R3W Sections 27, 31 T11S R3W Sections 6, 7, 18, 24, 25, 36 T12S R3W Sections 2, 3, 4 T11S R2W Sections 7, 8, 18, 19, 29, 31 T12S R2W Sections 1	Roads and a waterline in Sections 3, 4 T12S R3W
FFO	8	UTU-095792	T12S R1W Sections 11, 14	Water pipeline and roads
KFO	33	UTU-96253	T43S R1E Sections 6, 7	Cottonwood Canyon Road and East Clark Bench Road

Note: ROW issuance for parcel 33 is still pending.

There are currently 46 land use authorizations encumbering 93 of the SITLA parcels[16] (see Section 2.1.1 and Appendix A for details). Encumbrances include access roads, boundary fences,

[16] This count excludes authorizations associated with mineral resources and livestock grazing. See Sections 3.9 and 3.11 for a discussion of current encumbrances associated with these resources.

earthen reservoirs, transmission lines, off-highway access roads and recreational trails, parking lots, telecommunication facilities, and wilderness therapy permit areas.

Land use authorizations on the six equalization parcels (3C, 3D, 3E, 7A, 7B, and 7C) occur only on parcel 3C, and consist of a ROW for a pipeline and well site, as well as work associated with the Turkey Farm Road Fire.

3.10.1.2 Management Framework

The Dingell Act directs the exchange of the lands being analyzed and states that the land exchange is subject to Section 206 of FLPMA. Under Section 206 of FLPMA, exchanges could be considered if they are determined to be in the public interest. Secretarial Order 3373 requires the BLM to evaluate public access on BLM-administered land that could be transferred out of federal ownership. Existing authorized use and this analysis effort covers future ROW decisions; no further NEPA analysis is needed for the parcels unless current land use authorizations and existing rights are changed or renegotiated.

As land manager and fiduciary of trust land assets, SITLA's mission and management goals involve "Administering trust lands prudently and profitably for Utah's schoolchildren and other trust beneficiaries" (SITLA 2022b).

3.10.2 Proposed Action

Under the land exchange, SITLA would convey approximately 116,000 acres of Utah trust lands and land interests to federal ownership to be managed by BLM. In exchange, the BLM would convey approximately 89,700 acres of BLM land and land interests to the Utah land trust where it would be managed by SITLA. This land exchange would have minimal effect on land access because the changes would mostly be administrative in nature. Following conveyance, the BLM and SITLA would manage acquired lands and ROWs in a manner consistent with their existing management and regulations. All current encumbrances would be conveyed with the land exchange until their expiration (if applicable), which then would be subject to the respective agency's policies regarding renewal, at which point, either agency could decide not to renew. The BLM would convert 24 existing ROWs to perpetual status, as well as convert three ROWs to an easement, as shown in Table 3.10-2.

Table 3.10-2. BLM Rights-of-Way Conversions

Parcels	Serial Number	Type	ROW Conversion
2	UTU 070321	ROW power transmission-FLPMA	Convert to a perpetual ROW
2, 5, 5S	UTU 054834	ROW power transmission-FLPMA	Convert to a perpetual ROW
5, 5S	UTU 047285	ROW power transmission-FLPMA	Convert to a perpetual ROW
8	UTU036797	ROW power transmission-FLPMA	Convert to a perpetual ROW
8	UTU 082829	ROW power transmission-FLPMA	Convert to a perpetual ROW
32	UTU 010657	ROW power transmission-FLPMA	Convert to a perpetual ROW
8	UTU 0115794	Power transmission	Convert to a perpetual ROW
10, 12	UTU 060642	Power transmission	Convert to a perpetual ROW
11	UTU 076357	Railroad spur and access road	Convert to easement requested
11, 12	UTU 083067	ROW power transmission-FLPMA	Convert to a perpetual ROW
23	UTU 0142226	ROW power transmission-FLPMA	Convert to a perpetual ROW

Parcels	Serial Number	Type	ROW Conversion
24	UTU 022141	Power transmission line	Convert to a perpetual ROW
24	UTU 039936	Power transmission	Convert to a perpetual ROW
26	UTU 066122	ROW power transmission-FLPMA	Convert to a perpetual ROW
29	UTU 015341	Power transmission	Convert to a perpetual ROW
29	UTU 021372	Power transmission	Convert to a perpetual ROW
32	UTU 0015595	Power transmission	Convert to a perpetual ROW
32	UTU 0035443	ROW power transmission-FLPMA	Convert to a perpetual ROW
32	UTU 0048144	ROW power transmission-FLPMA	Convert to a perpetual ROW
32	UTU 0142563	Power transmission	Convert to a perpetual ROW
32	UTU 0148006	Power transmission	Convert to a perpetual ROW
32	UTU 080811	ROW-roads	Convert to easement requested
32	UTU 080812	Power transmission	Convert to a perpetual ROW
32	UTU 93630	ROW-roads	Convert to easement requested
34	UTU 047281	ROW power transmission-FLPMA	Convert to a perpetual ROW
42	UTU 092548	ROW power transmission-FLPMA	Convert to a perpetual ROW
53	UTU 0046143	Power transmission-FLPMA	Convert to a perpetual ROW

Additionally, as noted in Table 3.10-1, the BLM would issue itself perpetual ROWs on existing roads through BLM parcels transferred to SITLA to ensure access to public lands. For above reasons, reasonably foreseeable future land use actions on BLM and SITLA parcels (see Table 3.1-1) are not anticipated to measurably change land access and realty.

Public water reserves (parcels 1, 36, 38S, and 54) would be automatically revoked upon transfer of the land in accordance with PLO 5444, as amended by PLO 6527. The revocation would remove the withdrawn status, which allows the land to be conveyed, and the parcel would no longer be withdrawn from settlement, location, sale, or entry unless re-conveyed back to the United States. This would allow for future land uses (which are anticipated to consist of mineral and helium exploration) that would have otherwise been incompatible with designated public water reserve uses. However, any future mineral and helium exploration would be wholly contingent on the confirmation of commercially viable deposits within these parcels, as well as market conditions, pursuant to state laws, regulations, and policy that apply to SITLA lands. Discussion of water rights impacts associated with this revocation is provided in Section 3.20.

3.10.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to land access and realty due to reasonably foreseeable land actions that could occur after the land exchange. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would not affect lands access and realty because any reclamation or future land activities on BLM parcels 46–50 and 46C would be managed in accordance with all applicable BLM regulation, policy, or guidance and would not decrease public access beyond the existing baseline.

3.10.4 Cumulative Impacts

Other reasonably foreseeable future actions listed in Table 3.1-3 are not anticipated to impact lands access and realty, because they would not affect existing encumbrances on, or public access across, BLM and SITLA parcels.

Reasonably foreseeable land actions that could occur after the land exchange, as described in Table 3.1-1, would be managed in accordance with all applicable SITLA regulation, policy, or guidance and would not change public access on affected parcels, because the BLM would obtain road ROWs prior to conveyance. Therefore, no cumulative effects on lands access and realty are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.11 Livestock Grazing and Rangeland Health

As directed by the Taylor Grazing Act of 1934 and Multiple-Use Sustained-Yield Act of 1960, the BLM is required to manage public rangelands for various uses and values, including livestock grazing. BLM rangeland management programs use rangeland health standards and guidelines to manage the health and productivity of public rangelands for the use and enjoyment of current and future generations.

3.11.1 Affected Environment

3.11.1.1 Parcel-Specific Conditions

The BLM currently manages 83 grazing permits on 44 parcels proposed for exchange within the *livestock grazing analysis area* (see Section 2.1.1 and Appendix A for details). This livestock grazing activity involves an estimated 7,737 animal unit months (AUMs) and occurs within 43 allotments encompassing 83,942 acres. SITLA currently manages 60 grazing permits on 196 parcels proposed for exchange within the livestock grazing analysis area (see Section 2.1.1 and Appendix A for details). This livestock grazing activity encompasses an estimated 4,364 AUMs and occurs within approximately 107,039 acres. As defined in 43 CFR Part 4100 grazing regulations, range improvements are authorized physical modifications or treatments that are designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; restore, protect, and improve the condition of rangeland ecosystems to benefit livestock, wild horses and burros, and fish and wildlife. The term includes, but is not limited to, structures, treatment projects, and use of mechanical devices or modifications achieved through mechanical means. Both BLM and SITLA allotments contain range improvements such as water tanks, pipelines, fences, and cattleguards that are used to enhance livestock management. Table 3.11-1 discloses range improvements on BLM parcels. Range improvements on SITLA parcels consist of the following:

- McCoy Flat Reservoir (new construction) and McCoy Flat Reservoir Repair – parcels SE108 and SE111
- Globe Link Ponds – parcel SE226
- Diamond Rim Bullhog project – parcel SE102
- Unnamed pipeline and trough for stock watering and Buckhorn Pipeline Phase IV – parcel SE161
- Lower Range Creek Drift Fence – parcel SE129

- Diamond Mountain Herbicide project – parcel SE102 and SE103
- UDWR Guzzlers – parcels SE130 and SE142

Additional unmapped range improvements and infrastructure may also be present and actively used on SITLA parcels. Equalization parcels do not support livestock grazing activities.

3.11.1.2 Management Framework

The BLM's rangeland management program focuses on maintaining and improving range conditions throughout the state by assessing Utah's Rangeland Health Standards, monitoring range conditions, and making necessary adjustments to livestock management (BLM 1997). Grazing on these allotments is authorized through the issuance of grazing permits that typically last 10 years and provide a restriction of the number of AUMs allowed for each permittee.

SITLA's grazing program authorizes livestock grazing on allotments through the issuance of permits that last 15 years but can be cancelled with a 30-day notice for a higher or better use. Most trust lands are scattered within BLM allotments and are permitted to BLM permittees; however, there are a few blocks of trust lands that are fenced separately from federal allotments and permitted at premium rates (SITLA 2023a).

3.11.2 Proposed Action

Under the land exchange, the BLM would relinquish 7,737 AUMs due to the transfer of BLM parcels to SITLA; however, the BLM would acquire 4,364 AUMs due to the receipt of SITLA parcels. This land exchange would not impact grazing operations for permittees in the short term, because the changes would mostly be administrative in nature. The land exchange would require adjustments to grazing use authorizations to reflect the amount of forage gained or lost. The BLM and SITLA would modify grazing permits, as appropriate, in accordance with the regulations within 43 CFR Part 4100 and the UAC respectively. Impacts to rangeland management staff could also occur because the conveyance of permits would require administrative functions to account for the exchange; however, most of the AUMs gained by the BLM from existing SITLA grazing permits are already considered as an exchange-of-use or as percent federal range in existing BLM grazing permits. Similarly, most of the AUMs gained by SITLA would be from existing BLM grazing permits that are already managed in conjunction with the existing SITLA grazing permits.

Grazing would continue where conveyed with existing encumbrances. Upon permit renewal, continuance of grazing would be subject to agency rates, policies, and provisions. As described in the Dingell Act, lessees would be "entitled to a preference to renew the lease, permit, or contract;" however, the Dingell Act also indicates that a grazing permit, lease, or contract could be cancelled or modified if the land is sold, conveyed, transferred, or leased for non-grazing purposes.[17]

Grazing permittees currently pay $1.35 per AUM on BLM lands and $6.65 per AUM on SITLA lands. Therefore, permittees that graze on BLM parcels that would be conveyed to SITLA would experience increased grazing fees in the long term, whereas the opposite would occur for permittees that graze on SITLA parcels that would be conveyed to the BLM. Because the BLM would realize a net loss in AUMs from the land exchange, there would be a decrease in revenues

[17] As a caveat, the Dingell Act also notes that "Secretary or the State shall not cancel or modify a grazing permit, lease, or contract because the land subject to the permit, lease, or contract has been leased for mineral development."

to the federal government, although these impacts would be limited relative to overall livestock grazing revenue obtained in the state of Utah. Conversely, SITLA would experience increased revenue from the net gain in AUMs.

The land exchange would result in the conveyance of rangeland improvements present on BLM and SITLA parcels. Use and maintenance of range improvements would be subject to the Dingell Act, which states, "the Secretary and the State shall allow the grazing to continue for the remainder of the term of the lease, permit, or contract, subject to the related terms and conditions of user agreements, including permitted stocking rates, grazing fee levels, access rights, and ownership and use of range improvements." Newly acquired range improvements from SITLA that are kept by the BLM would be accessed and maintained as needed per the 4100 grazing regulations and Cooperative Range Improvement agreements. Any water right issues tied to these projects that could arise would be handled in accordance with applicable state and federal laws and policies (see Section 3.20). New or modified range improvement agreements or range improvement permits would be made as warranted.

Reasonably foreseeable changes to future land uses have been identified on some BLM parcels that would be transferred to SITLA and currently support livestock grazing (Table 3.11-1). If these actions, consisting of residential, recreational, water supply, industrial, and energy development and mineral exploration, are implemented, they could result in removal of rangeland improvements, installation of new fencing, restrictions or adjustments of permit components such as season of use and AUMs, or cancellation of permits. This change would decrease long-term livestock grazing revenue obtained by SITLA (although this loss would be replaced by other revenue sources). For most land use categories, however, the number of AUMs potentially affected represents no more than 7% of total AUMs conveyed to SITLA. Although mineral exploration activities could impact a larger number of AUMs, the Dingell Act eliminates the ability for the permits to be cancelled or modified solely due to mineral development.

Table 3.11-1. Reasonably Foreseeable Future Land Uses, Animal Unit Months, Acreage, and Range Improvements by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Number of AUMs (% of total)	Allotment Acreage	Range Improvements
6	Residential development	10 (0.1%)	108	None
8–12, 23–25	Solar energy development	520 (7%)	6,451	Fence, Smithson Pasture Fence, Allotment Boundary Fence, Paint Mine Well, North Paint Mine Fence, and Nephi West Bench Fence
26	Recreational development	0	1,447	None
27	Reservoir	0	121	None
28–30	Industrial development	109 (1%)	5,640	None

Parcels	Reasonably Foreseeable Future Land Use	Number of AUMs (% of total)	Allotment Acreage	Range Improvements
34–44	Mineral exploration	3,044 (39%)	39,177	Rubber Tire Pipeline and trough, Sabie/McIntyre Fence, Hop Creek Pipeline and four troughs, Copperopolis Fence, Andy's Pond, Diamond Spring Pipeline, Long Year Well, North Chambers Fence, McIntire Fence, Chambers Wash Fence, Tintic Protection No. 2 Fence, West Bench Fence, Sunrise Protection Fence, wildlife guzzler, pasture fences, South Pine Pipeline and Trough, Desert Mountain (Indian Hollow) Pipeline, Revenue Basin Fence, Wah Mountain Fence and cattleguard, Willow Spring Pipeline, and Pine Grove Spring and Pipeline Development
46–50	Underground coal mining operations	222 (3%)	6,221	Woodchopper Spring, Williams Draw Spring, and Little Park Fence
53	Lease potential for oil and gas	49 (0.6%)	1,533	Two gates, two cattleguards, three ponds, one guzzler
54	Helium development	72 (0.9%)	5,760	Jeffrey Well Pipeline and North San Rafael Fence

Livestock grazing and range improvements on SITLA parcels would continue after conveyance to the BLM. Therefore, reasonably foreseeable future land uses on SITLA parcels would not adversely or beneficially affect these resources beyond the general effects discussed above.

There are no equalization parcels containing grazing permits that would be impacted by the land exchange.

3.11.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to livestock grazing and rangeland health due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.11.4 Cumulative Impacts) could result in impacts in the livestock grazing analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would not affect livestock grazing because permitted AUMs and grazing on BLM parcels 46–50 would continue irrespective of the leasing moratorium.

3.11.4 Cumulative Impacts

Table 3.1-3 contains eight reasonably foreseeable projects that are not currently in operation and intersect or are directly adjacent to BLM and SITLA parcels with current grazing permits:

- Cross-Tie transmission project (parcels 8, 10, 12)
- Spanish Valley Community Development (parcel 32)

- Two Utah Department of Transportation (UDOT) road construction projects (parcels 32, SE216A–C)
- PacifiCorp ROW Disappearing Angel Substation (parcel 32)
- Goblin Valley Distribution and Telecommunication Lines project (parcels SE276, SE289, SE290, SE291A–B, SE292A–B)
- Active BLM oil and gas leases (parcels 2, 23–25, 53, 54)
- Potential helium development (parcel 54)

These actions could disturb up to an estimated 12,835 acres of land within the livestock grazing analysis area and remove vegetation, which could subsequently result in the establishment of invasive species and soil loss, and thus reduce forage production potential, as well as remove range improvements or add new fencing. Actions that preclude reclamation would have greater long-term impacts, though these eight projects would be limited in geographic extent relative to the amount of lands available for livestock grazing (7% of total allotment acreage) in the livestock grazing analysis area. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Reasonably foreseeable land actions on BLM parcels that could occur after the land exchange, described in Table 3.11-1, could also result in removal of rangeland improvements, installation of new fencing, permit modification, or cancellation of permits on an estimated 66,458 acres of grazing lands if implemented; however, most land actions would only impact a small number of AUMs or acreage and permits would not be cancelled or modified solely due to mineral development. Therefore, no appreciable cumulative effects on livestock grazing or rangeland health are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.12 National Historic Trails

National Historic Trails (NHTs) include routes used by early explorers, routes used during historically important regional and/or transcontinental migrations, and routes used during major military actions. This analysis describes and evaluates land exchange impacts to NHTs within the state of Utah that are mapped to intersect or be within 5 miles on each side of the mapped trail centerline (for a total corridor width of 10 miles) of one or more proposed exchange parcels, hereafter referred to as the *NHT analysis area*. A 5-mile buffer was selected to capture the resources, values, associated setting, recreational uses and users, and natural resources that contribute to the trails' Congressional designation. This buffer is consistent with the BLM's trail administration who identifies a trail management corridor as specified in BLM Technical Reference 6280-1.

3.12.1 Affected Environment

The Old Spanish NHT (Old Spanish Trail) is the only formally designated NHT that intersects proposed land exchange parcels. The trail was designated by the National Historic Trail Act in 2002, and it is co-administered by the BLM and the NPS. The first known Europeans to enter the future state of Utah were Fathers Francisco Atanazio Domínguez and Silvestre Vélez de Escalante and their expedition in 1776 to 1777 in search of a route from Santa Fe, New Mexico, to the California coast. The travels of these men represent the northernmost forays of colonial Spanish explorers into the western United States. Many other Euro-American groups soon

followed, using the same route out of Santa Fe, New Mexico, which at the time was still a Mexican territory that extended up through the Green River into the Uinta Basin; this route became known as the Spanish Trail.

Trail segments of the Pony Express NHT (Pony Express Trail) are located within the 5-mile NHT analysis area. The trail was designated an NHT by Congress in 1992, and it is administered by the NPS as a component of the National Trails System. The Pony Express Trail, in operation for a mere 10 months between April 1860 and October 1861, was the quickest way to get messages across the nation before establishment of transcontinental telegraph lines. Mail carried on horseback along the 1,800-mile-long trail took 10 days to travel from St. Joseph, Missouri, to Sacramento, California. The Pony Express Trail bisects northern Utah through Summit, Morgan, Salt Lake, Utah, Tooele, and Juab Counties. Pony Express Trail stations are still present on the landscape and in some locations the route traveled is fairly well established on the ground today.

3.12.1.1 Parcel-Specific Conditions

The alignment for the Old Spanish Trail (BLM and NPS 2017) intersects proposed BLM parcels immediately north of Fremont Junction along the Sevier County and Emery County line, in Castle Valley just east of Castle Dale, and at the south end of Spanish Valley, south of Moab, Utah. This mapped alignment intersects with five BLM parcels (parcels 25, 32, 33, 49, and 50). Additional NHT segments that do not intersect, but occur within 5 miles of parcels, are noted in Table 3.12-1.

Table 3.12-1. Parcels within 5 Miles of a National Historic Trail

National Historic Trail	Parcels
Old Spanish Trail	13, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 49, 50, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE173, SE177, SE180, SE182, SE183, SE184, SE186
Pony Express Trail	6

3.12.1.2 Management Framework

The National Trails System Act of 1968 (NTSA) established four classes of national trails located in both urban and rural areas. Among those four classes of trails are NHTs. NHTs are those trails that follow as closely as possible original trails or routes of national historic significance. The NTSA requires that the resources contributing to a trail's Congressional designation, termed as federal protection components in the NTSA, be protected so that substantial interference with the nature and purpose of the trail can be avoided. Individual trails are designated by Congress and are administered by one or more federal agency. The Old Spanish Trail is co-administered by the BLM and NPS. The Pony Express Trail is administered by the NPS. Trail administrators are tasked with developing trail-specific management plans. The management plan for the Old Spanish Trail was presented by the BLM and NPS in 2017. The management plan for the Pony Express Trail was published by the NPS in 1999 (NPS 1999). Each plan provides detailed descriptions of the trail and its historic context as well as designating each trail's ROW.

3.12.2 Proposed Action

Segments of the mapped Old Spanish Trail alignment would intersect five BLM parcels (25, 32, 33, 49, 50) with reasonably foreseeable land actions (solar energy or residential development and

expansion of underground coal mining) that could occur after the land exchange. No other NHT segments would intersect proposed exchange parcels; however, additional NHT segments would be located within potential viewing distance of reasonably foreseeable future land uses changes (up to 5 miles away) (see Table 3.12-1). Exchange of these parcels out of federal management would remove direct application of provisions of the NTSA, which requires resources that are contributing to a trail's Congressional designation be protected. If future development of these parcels occurs, there is increased potential for visual and auditory impacts to NHT users; however, the presence of any topographic or vegetative screening within the 5-mile buffer could help avoid or mitigate these impacts.

SITLA parcels that are currently owned by the state and are within 5 miles of the mapped Old Spanish Trail or Pony Express Trail alignment would be transferred to BLM management. Generally, all of the SITLA lands to be conveyed to the BLM would be managed for natural and cultural resources protection and be available for recreation use or continuation of existing encumbrances as established in the Dingell Act. Moreover, segments of NHTs that meet the criteria of a historic property for the purposes of the NHPA would be subject to historic preservation measures as provided by those laws. Accordingly, transfer of these SITLA parcels would not result in an appreciable change to the management of NHTs.

Overall, there would be a net gain in land that is within the viewshed of NHTs that would be acquired by the BLM, as compared to land that would be conveyed to SITLA, which would provide an overall benefit to the management of NHTs. There are no equalization parcels containing NHT segments that could be impacted by the land exchange.

3.12.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to NHTs due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.12.4 Cumulative Impacts) could result in impacts in the NHT analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the federal coal leasing moratorium would not affect NHTs because any reclamation or future land activities on BLM parcels 46–50 (which are within 5 miles of the Old Spanish Trail) would be subject to both the protections provided by the NTSA and Section 106 of the NHPA, and adverse effects would be avoided, minimized, and mitigated.

3.12.4 Cumulative Impacts

Adverse impacts to NHTs could occur from other present and reasonably foreseeable projects, depending on the nature of the projects as described in Table 3.1-3. An estimated 780 acres of future residential development, active oil and gas leases, and substation and road construction projects intersecting or directly adjacent to parcels 25, 32, and 33 are not currently in operation and could adversely affect segments of the mapped Old Spanish Trail alignment through demolition, fill, grading, blasting, subsurface excavation, or vibration, as well as changes to the viewshed. An estimated 11,283 acres of recreation development, residential development, road construction and substation projects, active oil and gas leases, and prescribed burning projects within the 5-mile viewshed of Old Spanish Trail and Pony Express Trail segments could also impact NHT users, although topographic or vegetative screening could reduce or eliminate these

impacts. If these projects are privately funded and avoid any federal or state permitting, NHTs would not be subject to federal protections. Projects that are directed, overseen, funded, partially funded, or permitted by the State of Utah or a federal agency, however, would respectively be subject to Utah Code 9-8-404 or Section 106 of the NHPA, and adverse effects would be avoided, minimized, and mitigated. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Reasonably foreseeable land actions that could occur after the land exchange could also add to visual and auditory impacts for NHT users on affected parcels. Up to 4,287 acres of Old Spanish Trail segments could be impacted by reasonably foreseeable solar energy or residential development and expansion of underground coal mining that could occur after the exchange, whereas up to 12,309 acres of disturbance on BLM parcels could occur within the 5-mile viewshed of Old Spanish Trail and Pony Express Trail segments. However, 9,932 acres of SITLA parcels that are within 5 miles of the mapped Old Spanish Trail or Pony Express Trail alignment would be conveyed to the BLM and generally managed for natural and cultural resources protection. Segments of NHTs that meet the criteria of a historic property for the purposes of the NHPA would be subject to historic preservation measures as provided by those laws. Therefore, the land exchange would not cumulatively impact NHTs.

3.13 Paleontology

Fossils vary in their relative abundance and distribution and not all are scientifically important. They are generally considered scientifically important paleontological resource if they are diagnostic, rare, unique, unusual, provide new or additional stratigraphic information, or in any other way added to the scientific knowledge of the taxon or geographic area. As defined by the Paleontological Resources Preservation Act 2009 (PRPA), paleontological resources are any fossilized remains, traces, or imprints of organisms preserved in or on the Earth's crust that are of paleontological interest and that provide information about the history of life on Earth. Paleontological resources are considered non-renewable resources because the organisms they represent no longer exist, and such resources, if destroyed, cannot be replaced.

3.13.1 Affected Environment

The BLM's Potential Fossil Yield Classification (PFYC) System provides baseline guidance for predicting, assessing, and mitigating paleontological resources (BLM 2022l). The PFYC system is a ranking of geological units according to their relative abundance of scientifically important paleontological resources. BLM has assigned a PFYC ranking (1–5) to each geological unit (formation, member, or other distinguishable units) at the most detailed mappable level based on the taxonomic diversity and abundance of previously recorded, scientifically significant paleontological resources associated with the unit and the potential for future discoveries, with a higher class number indicating higher potential. Additional rankings are provided for geological units of unknown potential (U), water (W), and ice (I). The PFYC system is not intended to be applied to specific paleontological localities or small areas within units. Although significant localities could occasionally exist in a geological unit, a few widely scattered important fossils or localities do not necessarily indicate a higher class; instead, the relative abundance of significant localities is intended to be the major determinant for the class assignment.

The geological units within the *paleontology analysis area* range in age from the Neoproterozoic to the Quaternary. The rock units within the paleontology analysis area contain diverse flora and fauna from numerous important time periods, such as the Cambrian Explosion, the vertebrate

transitions at the Permian-Triassic Boundary, the Cretaceous-Paleogene mass extinction boundary, and the beginning of mammal evolution in the Cenozoic. According to BLM PFYC data and associated previous geological mapping the paleontology analysis area includes geological units assigned to each of the PFYC classes 1 (very low) to 5 (very high), and unknown (PFYC U). Table 3.13-1 lists the paleontology analysis area geological units with PFYC values of 3, 4, 5 and U in order of relative age and provides their PFYC classification, summary of typical fossils, and acres within the BLM and SITLA parcels.

Comprehensive previous paleontological survey data for the paleontology analysis area are not available, but because there are documented localities within the paleontology analysis area, portions of the analysis area were previously surveyed. Based on a review of the UGS paleontological database and the Paleobiology Database locality data, there are 31 previously documented localities within the paleontology analysis area in 11 geological units. In ascending stratigraphic order, the geological units with known paleontological localities include the Ordovician Kanosh Shale and Fish Haven Formation, the Permian Kaibab Limestone, the Triassic Moenkopi Formation and Wingate Sandstone, the Jurassic Kayenta and Carmel Formation, and the Cretaceous Morrison, Dakota, Mancos, and Cedar Mountain Formations.

Approximately 46% of the paleontology analysis area consists of geological units designated as PFYC 4 or 5, 24% is designated as PFYC 3, 10% is designated as PFYC U, and 19% is designated at PFYC 1 or 2. Table 3.13-2 summarizes the total acres by PFYC values of 3, 4, 5, and U and number of known paleontological localities for the paleontology analysis area as well as separated by BLM and SITLA parcels.

3.13.1.1 Parcel-Specific Conditions

Current land use, including previous ground disturbance and previous or current human activity, varies by proposed land exchange parcel; these uses are summarized in Table 3.13-3 by acres of PFYC 3, 4, 5, and U.

Table 3.13-1. Potential Fossil Yield Classification 3, 4, 5, and U Geological Units in the Paleontology Analysis Area

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Alluvial deposits	Holocene	3	Qa	Pleistocene fossils, including vertebrates possible	3,622	15	3,637	0
Piedmont alluvium, surficial alluvium and colluvium (and older), young alluvial-fan, and terrace deposits	Quaternary	U	Qa, Qaf1, Qao, Qe, Qt	Pleistocene fossils, including vertebrates possible	3,070	799	3,869	0
Surficial Lake Bonneville deposits	Quaternary	U	Ql	No fossils previously documented but vertebrate fossils could occur	23	0	23	0
Alluvial river, stream, and wash deposits, undifferentiated	Pleistocene to Holocene	3	Qa	Pleistocene fossils, including vertebrates possible	1,467	221	1,688	0
Level 2 alluvium and younger alluvial-fan deposits	Pleistocene to Holocene	3	Qa2, Qafy	Pleistocene fossils, including vertebrates possible	311	80	391	0
Surficial alluvium, colluvium, alluvial fan, alluvial mud, alluvial-terrace, pediment-mantle and talus deposits	Pleistocene to Holocene	U	Qac, Qaf, Qal, Qam, Qap, Qapc, Qat, Qc, Qmt	None attributed to this mapped unit, but fossils are possible in Pleistocene age sediments	2,468	1,564	4,032	0
Alluvial-fan, intermediate-level alluvial-fan, and older alluvial-fan deposits	Pleistocene	3	Qaf3, Qaf5, Qafm, Qafo	Pleistocene fossils, including vertebrates possible	127	0	127	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Older alluvial gravel, younger and older South Flank piedmont alluvium, terrace, underflow-fan, lacustrine sand, older alluvium, and older fan deposits	Pleistocene	U	Qago, Qas2, Qas3, Qat, Qdf, Qls, Qoa, Qof	Pleistocene deposits could contain fossils; unofficial mentions of fossils in gravels in the area	10,398	726	11,124	0
Coalesced alluvial-fan deposits	Pliocene to Holocene	3	QTcf	Important fossils possible	928	0	928	0
Pediment Mantle	Pliocene to Holocene	U	QTpm	None attributed to this mapped unit, but fossils are possible in Pliocene and Pleistocene age sediments	170	5	175	0
Alluvial-fan deposits over Tertiary strata undivided	Tertiary to Quaternary	3	Qaf5/Ts	Pleistocene fossils, including vertebrates possible	35	0	35	0
Colluvial and residual gravel deposits over Bulldog Member of Fowkes Formation	Tertiary to Quaternary	U	Qng/Tfb (PFYC 4)	Quaternary units have no fossils previously documented but vertebrate fossils could occur and are known from the underlying Fowkes Formation	257	0	257	0
Tephrite, phonotephrite, and trachybasalt sills	Pliocene	U	Ts	Fossils possible but unlikely	0	43	43	0
Salt Lake Formation	Miocene	4	Tsl	Mammal fauna known	12,553	0	12,553	0
Wasatch Formation	Paleocene to Eocene	4	Tw	Diverse invertebrate and vertebrate fauna	13,756	0	13,756	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Collapsed and bleached Mossback Member of Chinle Formation	Paleogene to Holocene	4	bmb	See Mossback Member, Chinle Formation	0	2	2	0
Breccia pipes	Oligocene	2*	Tbp	No fossils, volcanic	11	0	11	0
Granodiorite	Oligocene	4	Tgd	Diverse flora, insect fauna and lacustrine tetrapod association	1,198	0	1,198	0
Volcanic rocks	Oligocene	U	Tov	No fossils, volcanic, non-welded tuffs could contain fossils	543	0	543	0
Lahar, breccia, and tuff of Keetley Volcanics	Eocene to Oligocene	U	Tkb	No fossils, volcanic	19	0	19	0
Dry Gulch Member of Duchesne River Formation	Eocene	3	Tdd	Fossils locally include primarily microvertebrate localities	259	0	259	0
Brennan Basin Member of Duchesne River Formation	Paleocene to Pliocene	5	Tdb	Diverse mammals, including titanotheres, camel, horse, creodont, insectivore, rodents, lagomorph, marsupial, artiodactyl, microvertebrates, and trace fossils	1,129	755	1,884	0
Bulldog Member of Fowkes Formation	Eocene	4	Tfb	Vertebrate fossils known	434	0	434	0
Sillem Member of Fowkes Formation, queried	Eocene	3	Tfs	Ostracods, gastropods	13	0	13	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Green River Formation, including the upper member	Eocene	4	Tg, Tgu	Diverse flora, insect fauna and lacustrine tetrapod association; insects, plants, various fish (gar fish scales common), turtles, crocodiles and alligators, birds, many types of mammals, and many varieties of snails and clams	360	250	610	0
Colton Formation	Eocene	3	Tc	Fresh water mollusks, ostracods, and charophytes	0	6,317	6,317	0
Flagstaff Member of Green River Formation and North Horn Formation	Paleocene	3	Tfn	Mollusks, including freshwater and land gastropods and pelecypods	694	759	1,453	0
Blackhawk Formation and Star Point Sandstone	Late Cretaceous	4	Kbh	Bird and frog tracks, dinosaurs	335	1,585	1,921	0
Price River Formation upper part, and Blue Castle Sandstone and mudstone Members	Late Cretaceous	4	Kbm, Kpru	Dinosaurs, microvertebrate sites, invertebrates, plants	2,278	8,677	10,955	0
Castlegate Sandstone	Late Cretaceous	3	Kc	Few trace fossil, leaves, invertebrates in marine facies	581	1,246	1,827	0
Cedar Mountain Formation, including the Buckhorn Conglomerate	Early Cretaceous	5	Kcmb, Kcmu	A rich vertebrate fauna, including Chondrichthyes (sharks, rays, and skates), fish, amphibians, reptiles, birds, and mammals	290	39	329	1

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Dakota Sandstone and Cedar Mountain Formation	Cretaceous	5	Kdc, Kdcm	See Dakota and Cedar Mountain rows	2	0	2	0
Mancos Shale, Blue Gate, Emery Sandstone, Ferron Sandstone, Junana Lopez, and Tununk Members and undivided	Late Cretaceous	3	Km, Kmb, Kmbg, Kme, Kmel, Kmem, Kmeu, Kmf, Kmjl, Kmju, Kmt	Scattered vertebrates (fish, sharks, crocodiles, turtles, dinosaurs), invertebrates (echinoderms, mollusks), and plants	8,323	1,143	9,466	6
Mancos Shale, Masuk Member	Late Cretaceous	4	Kmm	Scattered vertebrates (fish, sharks, crocodiles, turtles, dinosaurs), invertebrates (echinoderms, mollusks), and plants	402	0	402	0
Star Point Sandstone	Late Cretaceous	3	Ksp	Trace fossils, some plants; coastal facies; mostly beach sandstone	46	0	46	0
Middle Cretaceous formations, including Indianola, Mancos, Frontier, Straight Cuffs, Iron Springs	Cretaceous	3	K2	Specific to individual geological units; fossils are known	0	74	74	0
Early Cretaceous formations, including Dakota, Cedar Mountain, Kelvin	Cretaceous	5	K1	Specific to individual geological units; fossils are known	0	82	82	0
Dakota (or Naturita Formation) Sandstone	Late Cretaceous	5	Kd	Abundant plants, vertebrate tracks, microvertebrate sites, bones are rare, invertebrates locally	9	0	9	1

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Burro Canyon Formation	Early Cretaceous	3	Kbc	Trace fossils, tracks; plant and dinosaur bone fragments “rare”	19	0	19	0
Morrison Formation undivided and Bushy Basin Member	Late Jurassic	5	J2, Jmb	Diverse vertebrate fauna famous for dinosaurs	64	125	189	1
Salt Wash and Tidwell Members of Morrison Formation	Late Jurassic	4	Jms, Jmt	Less fossiliferous than other members, still contain important localities; fossils include petrified wood	216	1,623	1,839	2
Early Jurassic formations, including Summerville, Entrada, Carmel, Arapien, Twin Creek	Jurassic	4	J1	Mostly tracks, including important theropod tracks in the Summerville and some marine fossils; Carmel includes extensive invertebrate assemblages in marine facies and dinosaur footprints in costal deposits	0	208	208	0
Page Sandstone, Co-op Creek Limestone and Crystal Creek Members	Middle Jurassic	4	Jcpc	Co-op Creek has a diverse molluscan fauna with *Isocrinus* and marine reptile teeth	0	10	10	0
Curtis Formation	Middle to Late Jurassic	3	Jct, Jcu	Marine fossils, vertebrates, and invertebrates	0	591	591	0
Moab Member of Curtis Formation	Middle Jurassic	4	Jctm	Dinosaur tracks, particularly toward top.	23	0	23	0
Entrada Formation Slick Rock Member and undivided	Middle Jurassic	3	Je, Jes	Mostly tracks and traces, including burrows and dinosaur footprints, possibly a small crocodyliform	47	2,060	2,107	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Carmel Formation, undivided and lower and Crystal Creek members	Middle Jurassic	3	Jc, Jcl, Jcx	Extensive invertebrate fossil assemblages and dinosaur footprints; lower marine units preserve diverse invertebrates and marine reptile teeth	98	12,235	12,333	1
Glen Canyon Group (Navajo, Kayenta, Wingate, Moenave Formations) and Nugget Sandstone	Jurassic	4	Jg	Numerous types of vertebrates, invertebrates, and plants in these geological units; types depend on specific geological unit (see individual units for details)	0	10	10	0
Summerville Formation and Tidwell and Salt Wash Members of Morrison Formation	Late Jurassic	4	Jsms	Dinosaur tracks with some bones	3	0	3	0
Summerville Formation	Middle Jurassic	4	Js	Dinosaurs and pterosaurs	0	451	451	0
Temple Cap Formation	Middle Jurassic	4	Jt	Vertebrate tracks and dinosaur bones	0	306	306	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Navajo Sandstone (main body)	Early Jurassic	4	Jn	There are burrowed and rooted horizons, as well as fossiliferous playa lake facies that contain large conifer logs, leaves, ostracods, invertebrate and vertebrate burrows, and diverse assemblage of vertebrate tracks; vertebrate body fossils are rare, but include an early sauropodomorph, other sauropodomorphs, a theropod, crocodylomorphs, and actinopterygian fish	395	7,019	7,414	0
Navajo Sandstone basal and limestone beds	Early Jurassic	3	Jnb, Jnl	Fossiliferous playa lake facies	0	113	113	0
Kayenta Formation	Early Jurassic	4	Jk	Unionid bivalves, petrified wood, and tetrapod rib; vertebrates include hybodont and osteichthyan fishes, amphibians, caecilians, turtles, crocodiles, dinosaurs, cynodonts, mammals, and more; diverse and abundant track assemblages are common	3	5,001	5,004	1
Navajo Sandstone	Triassic to Jurassic	4	JTRn	Tracks with a few plant and bone sites	0	3,698	3,698	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Wingate Sandstone	Triassic	3	JTRw	Vertebrate body fossils are limited to the Chinle-Wingate contact; numerous tracks on slump blocks, but none in original stratigraphic position	0	1,392	1,392	1
Chinle Formation, undivided could include Moss Back, Monitor Butte, Temple Mountain, Church Rock, Owl Rock, and Petrified Forest Members	Late Triassic	5	TRc, TRcl, TRcu	Highly diverse fauna and flora	0	4,654	4,654	0
Kayenta Formation	Late Triassic	4	TRk	Unionid bivalves, petrified wood, and tetrapod rib; vertebrates include hybodont and osteichthyan fishes, amphibians, caecilians, turtles, crocodiles, dinosaurs, cynodonts, mammals, and more; diverse and abundant track assemblages are common	0	2,306	2,306	0
Wingate Sandstone	Late Triassic	3	TRw	Vertebrate body fossils are limited to the Chinle-Wingate contact; numerous tracks on slump blocks, but none in original stratigraphic position	0	1,014	1,014	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Moenkopi Formation, including Black Dragon, Moddy Canyon, Sinbad Limestone, and Torrey Members	Early to Middle Triassic	4	TRm, TRmb, TRmm, TRms, TRmt, Trmu	Abundant tracks and traces	0	23,913	23,913	2
Moenkopi and Dinwoody Formations	Early Triassic	4	TRmd	Invertebrates and tracks	0	590	590	0
Thaynes Limestone	Early Triassic	3	TRt	Diverse invertebrate fauna and rare marine vertebrate bones	21	0	21	0
Woodside Formation	Early Triassic	3	TRw	No fossils known	25	0	25	0
Cedar Mesa Sandstone Member of Cutler Formation	Permian	3	Pcc	Osteichthyans, amphibians, amniotes dominated by the synapsid Sphenacodon, leaf and stem impressions, including conifers, and permineralized logs	0	12	12	0
Kaibab Limestone (or Formation)	Permian	3	Pk	Abundant invertebrates, including brachiopods, conodonts, corals, crinoids, echinoids, mollusks, trilobites, shrimp; also fossil shark teeth and fish fossils	0	3,683	3,683	1
Park City and Phosphoria Formations	Permian	4	Pp	Invertebrates, fossil sharks, including Helicoprion tooth whorl	0	268	268	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Oquirrh Formation, Granger Mountain Member, including the limestone unit	Permian	3	Pogm, Pogml	Abundant and diverse invertebrate fossils such as crinoid ossicles, corals, bryozoans, fusulinids, and trace fossils	133	0	133	0
Morgan Formation	Middle Pennsylvanian	3	IPm	Invertebrate fossils, including fusulinids, brachiopods, and bryozoans	0	47	47	0
Oquirrh Formation, Wallsburg Ridge Member	Pennsylvanian	3	IPowr	Abundant and diverse invertebrate fossils	140	0	140	0
Round Valley Limestone	Early Pennsylvanian	3	IPr, Iprv	Invertebrate fauna	13	51	64	0
Oquirrh Group, Butterfield Peaks Formation and West Canyon Limestone	Early Pennsylvanian	3	Ipobp, Ipowc	Abundant and diverse invertebrate fossils, including crinoids, tabulate corals, and fusulinids	113	0	113	0
Doughnut Formation	Late Mississippian	3	Mdo	Invertebrate fossils	4	0	4	0
Doughnut Shale and Humbug Formation	Late Mississippian	3	Mdh	Invertebrate fossils	0	114	114	0
Great Blue Limestone, lower limestone member	Late Mississippian	3	Mgbl, Mgbs, Mgbu	Invertebrate fossils	530	0	530	0
Humbug Formation	Late Mississippian	3	Mh	Invertebrate fossils	402	0	402	0
Deseret Limestone	Mississippian	3	Md	Invertebrate fossils, including unique crinoid fragments	51	0	51	0
Gardison Limestone	Late Mississippian	3	Mg	Invertebrate fossils	14	0	14	0
Madison Limestone	Mississippian	3	Mm	Diverse invertebrate fauna	0	63	63	0

Geological Units	Age	PFYC	Geological Symbol(s)	Typical Fossils	BLM Parcel Acres	SITLA Parcel Acres	Total Acres	Number of Known Localities
Devonian Formations	Devonian	4	D	Invertebrates with some vertebrates	75	0	75	0
Laketown, Bluebell Dolomite	Silurian	3	S	Poor invertebrate fossils, including corals, crinoids, brachiopods noted from the Laketown	189	0	189	0
Fish Haven, Swan Peak, Garden City, Eureka and other Formations	Ordovician	3	O	Diverse invertebrate fossils dependent on specific geological unit	90	0	90	1
Kanosh Shale	Ordovician	3	Ok	Invertebrate fossils, including trilobites, brachiopods, bryozoans, echinoderms; also contains palynomorphs	8	0	8	1
Pogonip Group, undivided includes Kanosh Shale, Swan Peak, Garden City, and other possibly other formations	Ordovician	3	Op	Diverse invertebrate fossil assemblages include trilobites, sponges, crinoids, gastropods, nautiloids, shrimp, brachiopods, and bryozoans	63	0	63	0
Middle Cambrian Formations	Cambrian	4	C2	Invertebrates and trace fossils, soft body fauna locally	919	0	919	0
Prospect Mountain, Tintic, Ignacio, Geertsen Canyon and other Formations	Cambrian	3	C1	No determinable fossils	8	0	8	0
Mineral Fork Tillite	Neoproterozoic	3	Zmf	Abundant planktonic alga of *Bavlinella faveolata*	<1	0	<1	0
				Total Acres	**69,778**	**95,939**	**165,717**	

Table 3.13-2. Acres by Potential Fossil Yield Classification for BLM and SITLA Parcels

Parcel	Acres of PFYC 1 (percentage of total analysis area acres)	Acres of PFYC 2 (percentage total analysis area)	Acres of PFYC 3 (percentage total analysis area)	Acres of PFYC 4 (percentage total analysis area)	Acres of PFYC 5 (percentage total analysis area)	Acres of PFYC U (percentage total analysis area s)	Number of Previously Documented Localities
BLM	6,829 (3%)	13,199 (6%)	18,241 (9%)	32,963 (16%)	1,493 (<1%)	16,947 (8%)	14
SITLA	0 (0%)	19,899 (10%)	31,297 (15%)	55,918 (27%)	5,589 (3%)	3,137 (2%)	17
Totals	6,829 (3%)	33,098 (16%)	49,538 (24%)	88,881 (43%)	7,082 (3%)	20,084 (10%)	31

Table 3.13-3. Acres by Potential Fossil Yield Classification 3 to 5 and Unknown for Current Land Use on BLM and SITLA Parcels

Current Land Use	Total Number of Parcels	Parcel	Acres of PFYC 3 (Percentage of total parcel acreage)	Acres of PFYC 4 (Percentage of total parcel acreage)	Acres of PFYC 5 (Percentage of total parcel acreage)	Acres of PFYC U (Percentage of total parcel acreage)	Number of Previously Documented Localities
Coal, ROWs; livestock grazing	4	46–48 and 46C	1,357 (33%)	2,610 (63%)	0 (0%)	1 (<1%)	1
Federal land use authorizations (ROWs)	2	15, 17	77 (22%)	0 (0%)	0 (0%)	19 (5%)	0
Federal land use authorizations (ROWs); livestock grazing	12	8–13, 32, 33, 34, 53, 53M, 53OG	3,540 (39%)	641 (7%)	1,201 (13%)	1,147 (13%)	2
Livestock grazing	1	6	164 (95%)	0 (0%)	0 (0%)	9 (5%)	0
Mining	2	51M–52M	0 (0%)	0 (0%)	0 (0%)	60 (2%)	0
Mining, transmission; livestock grazing	3	42–44	255 (6%)	2,044 (47%)	0 (0%)	546 (13%)	2
Mining; livestock grazing	1	41	280 (10%)	159 (6%)	0 (9%)	1,998 (74%)	0

Current Land Use	Total Number of Parcels	Parcel	Acres of PFYC 3 (Percentage of total parcel acreage)	Acres of PFYC 4 (Percentage of total parcel acreage)	Acres of PFYC 5 (Percentage of total parcel acreage)	Acres of PFYC U (Percentage of total parcel acreage)	Number of Previously Documented Localities
Mining; ROWs; livestock grazing	13	28–30, 35–40, including 35M, 38M, 38S, 39S	8,153 (22%)	12,553 (34%)	290 (1%)	10,308 (28%)	4
Oil and gas lease	1	27	112 (92%)	0 (0%)	0 (0%)	8 (7%)	0
Recreation, ROWs	1	26	388 (43%)	405 (45%)	0 (0%)	97 (11%)	1
ROWs, coal; livestock grazing	2	49, 50	1,088 (50%)	0 (0%)	0 (0%)	1,088 (50%)	0
ROWs; livestock grazing	9	1–5, 2S, 3S, 5S, and 21	63 (<1%)	14,551 (87%)	0 (90%)	1,593 (10%)	1
ROWs; livestock grazing	4	23–25, 54	2,390 (29%)	0 (0%)	1 (<1%)	74 (1%)	3
No known activities	1	20	376 (95%)	0 (0%)	0 (0%)	0 (0%)	0
None provided	219	SE101–SE297B	31,231 (27%)	55,918 (48%)	5,589 (5%)	3,137 (3%)	17

Note: Table does not include the parcels or acreage mapped as PFYC 1 or 2 because the likelihood of fossil remains in those parcels is very low to low.

Twelve BLM parcels (2, 24, 25, 26, 28, 32, 34, 35, 40, 42, 44, 46) contain 14 documented paleontological localities, and 13 SITLA parcels (S285, SE162, SE178, SE182, SE196, SE197, SE216C, SE246, SE257, SE258, SE259, SE266, SE288A) contain 17 documented paleontological localities. Table 3.13-4 provides the Smithsonian Number, other locality number and name, geological unit, and brief description for the localities within BLM parcels and Table 3.13-5 provides these details for the localities within SITLA parcels. Fossils from these localities are diverse and range from isolated occurrences of petrified wood and traces to larger assemblages of invertebrates and concentrates of vertebrates, including dinosaurs.

Exposure of geological units designated as PFYC 3, 4, 5, and U (where the geological units with potential to contain fossils are immediately visible at the surface) occur within the proposed exchange parcels and these areas depend on topography, terrain, location of erosional features (e.g., washes, creeks, and rivers), vegetation type, amount, and density, and human-made excavations typically for infrastructure.

Table 3.13-4. Previously Documented Paleontological Localities within BLM Parcels

Smithsonian Number	Other Locality Number(s) and Name	Geological Unit	Description
Ri0101	None provided	Wasatch Formation	Mammal canine tooth in conglomerate from trench of pipeline constructed, considered important
Be0038	None provided	Burnt Canyon Limestone	Invertebrates: location roughly estimated by UGS from fieldwork done by C.H. Hightower in 1959
Em0036	AERC Temp 612A/IP: Megadon Energy Corp, Seleratus 1-25	Mancos Shale	Densely packed gastropods and bivalves in sandstone matrix, widely scattered on the surface over a large area; extent of exposure is unknown but covers at least 2 square miles
Em0225	USGS Mesozoic Locality D7229: Herring Flat	Mancos Shale, Emery Sandstone	Invertebrates: location estimated by UGS from Peterson and Ryder (1975) and Cobban (1970); also reported in Cobban 1976 (and plotted with less confidence as Em270i)
Em0344	Dinosaur Triangle Road Log Mile 112.8: Interstate 70 road cut	Mancos Shale, Tununk Shale	Abundant flattened ammonites as reported in Rigby and Gutschick (1976)
Em0925	None provided	Price River Formation, Blue Castle Sandstone Member	Silicified wood fragments (100 plus), one fragment in sandstone block (29 × 2 centimeters); others loose
Em0946	Bertog's Bone	Mancos Shale, Juana Lopez Member	Fossil bone; locality is in the *Prionocyclus wyomingensis* zone; ammonites are small and the *P. wyomingensis* are all broken
Jb0164	Locality O-21, Sheeprock Mountains	Fish Haven Dolomite	Invertebrates: location estimated by UGS from Cohenour (1959)
Not provided	UCM Location 78203 (PROXY)	Dakota Group	Chordata as reported by Zelenitsky et al. (2000)

Smithsonian Number	Other Locality Number(s) and Name	Geological Unit	Description
Not provided	Castle Dale, Jensen Locality 1	Dakota Group, Cedar Mountain Formation, Mussentuchit Member	Chordata as reported by Jensen 1970
Not provided	Ophir Pass	Manning Canyon Shale	Porifera as reported by Rigby and Moyle 1959
Not provided	Tintic Mining District Section 0-825	Opohonga Formation	Arthropoda, Brachiopoda reported in Hintze 1951
Not provided	San Francisco Mining District Section 76-132	Kanosh Shale (unconfirmed)	Arthropoda, Mollusca, Brachiopoda, Chlorophyta reported in Hintze 1951
Sa0530	Williams (MAPCO) Rocky Mountain Expansion Loop Pipeline	Morrison, Brushy Basin Member	Petrified wood weathering from fluvial channel sandstone

Note: Locality numbers and names have been taken directly from UGS paleontological database and have not been edited.

Table 3.13-5. Previously Documented Paleontological Localities within SITLA Parcels

Smithsonian Number	Other Locality Number(s) and Name	Geological Unit	Description
Em0046	Wild Horse Dinosaur Tracks: Zach's Tracks	Kaibab Formation	Invertebrates: location roughly estimated by UGS from Baker 1946
Em0069	Castle Dale, Jensen Locality 1	Kayenta Formation	Casts of a single species of pelecypod, small and without sculpture; location roughly estimated by UGS from Gilluly 1929
Em0094	USGS Mesozoic Locality 25681, San Rafael Swell, in Paleobiology Database data also	Kaibab Formation	Invertebrates: location roughly estimated by UGS from Gilluly and Reeside 1927
Em0138	Ophir Pass	Moenkopi Formation, Kaibab Formation	Invertebrates: location roughly estimated by UGS from Orgill 1971
Em0156	Bertog's Bone	Carmel Formation	Bivalves reported in Imlay 1964
Em0368	CEUM Loc 2017-4v: Calf Mesa Phytosaur	Morrison Formation, Salt Wash Member	Sauropod dinosaur, possibly Apatosaurus (string of seven-plus articulated caudal vertebrae); petrified logs approximately 100 meters west of sauropod tail
Em0467	None provided	Chinle Formation, Moss Back Member	Silicified log: previous recommendation was to avoid fossils during backfilling
Em0468	Locality O-21, Sheeprock Mountains	Chinle Formation, Moss Back Member	Silicified wood: previous recommendation was to avoid fossils during backfilling
Em0469	None provided	Chinle Formation, Moss Back Member	Silicified wood: previous recommendation was to avoid fossils during backfilling
Em0470	None provided	Chinle Formation, Moss Back Member	Silicified wood: previous recommendation was to avoid fossils during backfilling

Smithsonian Number	Other Locality Number(s) and Name	Geological Unit	Description
Em0484	None provided	Moenkopi Formation, Sinbad Limestone	Ammonites, bivalves, gastropods
Em0486	None provided	Moenkopi Formation, Sinbad Limestone	Ammonites (three ammonite zones), bivalves, gastropods, scaphopods
Em0816	None provided	Morrison Formation, Salt Wash Member	Several dinosaur tracks in fallen block
Em0843	None provided	Wingate Formation	*Eosauropus* and other vertebrate tracks in large block (12 × 30 feet) with multiple tracks and trackways
Em0893	UCM Loc. 78203 (PROXY)	Chinle Formation	There are several large logs in the area along with a disarticulated Phytosaur skeleton that includes teeth, limbs, ribs, and other bones; material collected: teeth
Not provided	USGS Mesozoic Locality D7229: Herring Flat	Mancos Shale	Mollusca as reported in Walaszczyk and Cobban 2006
Not provided	Dinosaur Triangle Road Log Mile 112.8	Mancos Shale	Mollusca as reported in Walaszczyk and Cobban 2006

Note: Locality numbers and names have been taken directly from UGS paleontological database and have not been edited.

3.13.1.2 Management Framework

Several statutes, regulations, and other guidance that inform paleontological resource management are applicable to the proposed land exchange.

FLPMA requires the management of public land in a manner that would protect the quality of their scientific value. The PRPA (16 USC 470aaa-aaa-11) states that the Secretaries of the U.S. Department of the Interior and the U.S. Department of Agriculture shall use scientific principles and expertise to manage and protect paleontological resources on BLM land. With the passage of the PRPA, Congress defined paleontological resources and reaffirmed that paleontological resources collected from BLM land are federal property. The PRPA is consistent with the existing BLM policies, including Manual 8270 and Handbook 8270-I (BLM 1998a, 1998b). The BLM also established new regulations for paleontological resource protection in 2022 (43 CFR Part 49) that, among other items, provide guidance on preserving, managing, and protecting paleontological resources on BLM lands; establish processes for paleontological resources permitting, requirements, modifications, and appeals; address management of paleontological resource collections; and identify prohibited acts and criminal/civil penalties.

Following PRPA (16 USC 470aaa-3), which states that a paleontological resource could not be collected from BLM land without a permit (except for the casual collecting exemption), the BLM requires a qualified collector to obtain a permit and curation agreement within approved repository for storage of federal fossils prior to the collection of any vertebrate fossil and all research specimens regardless of the type (e.g., vertebrate, invertebrate, or plant). The BLM does allow for casual collection of a reasonable amount (i.e., 25 pounds per person per day) of common invertebrate and plant fossils (i.e., non-vertebrate paleontological resources) in all areas unless formally closed to casual collection. No known casual collection areas are identified

within the analysis area within the BLM parcels; however, this information can be difficult to track because the BLM does not require authorization or notification for these actions. Casting of vertebrate fossils, including dinosaur tracks, is prohibited unless allowed under a scientific/research permit issued by the BLM. Petrified wood fossils on BLM lands are often treated as a mineral material and could be collected under the Material Sales Act of 1947 (as amended). The BLM final paleontological resources preservation rule provides additional details for the management of paleontological resources (U.S. Department of the Interior 2022).

UAC Title 79 Chapter 3 (Natural Resources: UGS) defines paleontological resources as the remains of prehistoric life pertaining to the natural history of the state and recognizes that these resources are important and therefore require the preservation of critical fossil resources on state land. This code specifies that critical paleontological resources are vertebrate fossils and other exceptional fossils designated as state landmarks and mandates that people removing or excavating important fossils on state land be qualified and permitted under joint jurisdictional cooperation from the UGS, Utah Museum of Natural History, and the SITLA (UAC 79-3-501 and 79-3-502). It specifies that before expending state funds or approving an undertaking, state agencies must consider the effects on paleontological resources, allow the UGS director or assigned staff a reasonable opportunity to comment, and maximize the scientific information recovered (UAC 79-3-508).The UAC also establishes that paleontological resources on SITLA lands are owned by these entities; establishes penalties for permit violations for the excavation of critical paleontological resources on SITLA lands; protects the interests of SITLA in managing resources on their land; provides for the designation of paleontological landmarks on public or private land and a state paleontological register; and establishes training materials for volunteers who assist paleontologists (UAC 79-3 503-507 and 509-510). Right-of-entry permits and easements on SITLA lands are governed by UAC R850-40 and -41. Applications are reviewed by the State Resource Development Coordinating Committee. This process gives local government and other state and federal agencies, including the UGS, the opportunity to review the easement application and submit comments regarding the application to the administration. If the proposed easement is located within an area where paleontological resources could exist, the UGS would often request that a paleontological detailed assessment, including a field survey, be conducted. If a paleontological survey is required, it is typically the responsibility of the applicant to obtain this survey and bear all associated costs. Other SITLA actions (e.g., special use leases, land sales, timber sales, and development designations) typically require review by the State Resource Development Coordinating Committee pursuant to an MOU between SITLA and the Utah Public Lands Policy Coordinating Office (SITLA and Utah Public Lands Policy Coordinating Office 2014).

A rockhounding permit, that specifies location of interest, is required to collect minerals and/or materials from SITLA lands. Each permit authorizes hand collection (no mechanized equipment) of up to 25 pounds per day and a maximum of 250 pounds per year. Permits do not authorize collection for commercial use or collection of vertebrate fossils and other exceptional fossils. All vertebrate fossils must be reported to the UGS and SITLA. Collected fees benefit Utah's public school system and other trust beneficiary institutions. Rockhounding on trust lands without a permit is considered trespassing. There are no known current rockhounding permits for fossil collection within the analysis area. Requests to SITLA for fossil collection through a rockhounding permit is unusual; most fossil collecting from SITLA lands is limited to research and consulting permits, which are managed for SITLA by the UGS.

3.13.2 Proposed Action

A total of approximately 18,241 acres of PFYC 3, 32,963 acres of PFYC 4, 1,493 acres of PFYC 5, and 16,947 acres of PFYC U, consisting of 14 locations with previously documented fossils, would be present on BLM parcels transferred to SITLA. Approximately 31,297 acres of PFYC 3, 55,918 acres of PFYC 4, 5,589 acres of PFYC 5, and 3,137 acres of PFYC U, consisting of 17 locations with previously documented fossils, would be present on SITLA parcels transferred to the BLM (see Tables 3.13-2, 3.13-4, and 3.13-5).

Table 3.13-6 summarizes acres of land by PFYC value and number of localities for BLM parcels with reasonably foreseeable future land use changes (as defined in Table 3.1-1).

Permitted access to areas with potential for paleontological resources is not anticipated to change because of the land exchange, except in instances where the parcels could be sold or conveyed to private landowners in the future. In addition, all lands conveyed to the BLM would be open for casual fossil collection, instead of requiring permitted access, which rarely occurs on SITLA lands. This could result in paleontological resource discoveries in new areas if proper protocols are followed by the casual collector, including that all rare or unusual specimens are left in place and reported to the BLM authorizing officer.

Any future ground-disturbing activities on BLM parcels associated with construction (e.g., vegetation removal, grading, trenching, heavy equipment traffic) could cause damage to, or loss of, scientifically important fossil resources through physical impact (e.g., crushing or breaking) and could cause the erosion of fossils from exposed bedrock in areas of cleared vegetation or graded slopes. Future ground-disturbing activities could result in the immediate loss of known or unknown paleontological resources and their contextual data from crushing, breaking, or displacement. Ground disturbance could also subject fossils to long-term damage or destruction from erosion if they are not collected prior to being fully eroded. In general, shallow ground disturbance in areas with thick vegetation have a lower potential to impact important paleontological resources, as compared to areas with exposed bedrock. Indirectly, future ground disturbance could create improved access to the public and increased visibility, potentially resulting in unauthorized collection or destruction of paleontological resources. Similar impacts could also occur from increases in human activity during future construction or implementation of a proposed project. Scientifically important fossils that would otherwise remain buried or undiscovered and unavailable for scientific study could be revealed by future ground disturbance or human activity. Such fossils would be a beneficial effect of the land exchange if collected properly, curated into the collections of a repository that meets federal agency standards, and made available for scientific study and education.

Both SITLA and the BLM would consider paleontological resources prior to authorizing a proposed future action. The paleontological resource review process and management of resources does vary by agency and could also vary by project type and PFYC value. Required paleontological reviews, surveys, and mitigation or treatment of an area could be modified as a result of the land exchange due to the variation in paleontological resource assessment strategies.

Table 3.13-6. Acres by Potential Fossil Yield Classification and Documented Localities for BLM Parcels with Reasonably Foreseeable Future Land Use

Reasonably Foreseeable Future Land Use	Total Number of Parcels	Parcel	Acres of PFYC 1 and 2 (percentage of parcel[s] acres)	Acres of PFYC 3 (percentage of parcel[s] acres)	Acres of PFYC 4 and 5 (percentage of parcel[s] acres)	Acres of PFYC U (percentage of parcel[s] acres)	Number of Previously Documented Localities
Solar energy, reservoir, pipeline, and/or fiber-optic development; mineral and oil and gas exploration	38	8–13, 23–25, 27, 33–50, 53, 54, including 35M, 38M, 38S, 39S, 46C, 51M–52M, 53M, 53OG	18,354 (28%)	12,856 (20%)	18,688 (29%)	15,509 (24%)	9
Residential development	2	6, 15	0 (0%)	206 (88%)	0 (0%)	28 (12%)	0
Recreational and industrial development	5	17, 26, 28–30	1,249 (17%)	4,992 (71%)	695 (10%)	97 (1%)	3

Note: Table does not include the equalization parcels because they are 100% PFYC 1 or 2.

Future land uses on SITLA parcels and equalization parcels (if needed for value equalization purposes) would generally involve natural and cultural resource protection, recreation use, and continuation of existing encumbrances as established in the Dingell Act. Additionally, as described in Section 3.13.1.2, paleontological resources would be protected through the implementation of federal laws, regulations, and policies. Therefore, reasonably foreseeable actions on SITLA and equalization parcels after conveyance (see Table 3.1-2) would not adversely affect paleontological resources.

3.13.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to paleontological resources due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.13.4 Cumulative Impacts) could result in impacts in the paleontology analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit paleontological resources in the short term because reclamation of BLM parcels 46–50 and 46C could decrease subsurface disturbance and human activity caused by mining activities. However, future land uses post-reclamation could reintroduce risk of destruction or discovery/recovery of paleontological resources if they cause surface or subsurface physical disturbance.

3.13.4 Cumulative Impacts

Reasonably foreseeable future actions can influence the potential for impacts to paleontological resources in various ways:

- Potential for encountering paleontological resources increases as subsurface disturbance and human activity increase throughout the region, and these resources could be adversely affected if they are not managed appropriately. If previously unrecorded paleontological resources are identified, activities could also contribute to an increase in the knowledge of paleontological data in the area and collection of newly discovered specimens.
- Any land-disturbing activity can cause surface and subsurface physical disturbance that could result in the destruction or discovery/recovery of paleontological resources. Surface disturbance associated with actions such as planned transportation, electrical, solar, oil and gas, or irrigation developments increase the risk for the physical loss or damage of fossils and their contextual data.
- Any new roads and increases in human activity can also lead to paleontological resource destruction or discovery/recovery. Improved access and other increases in human activity can also cumulatively impact paleontological resources through increased levels of authorized and unauthorized fossil collection, or vandalism; however, the likelihood of these effects depends on the proximity of proposed disturbances to known and unknown paleontological resources.

Cumulative effects from ground disturbance or human activity would depend on the disturbance amount, placement, type, and duration of action, and agency requirements for paleontological resource assessment and preservation. Therefore, cumulative effects from the present and

reasonably foreseeable actions listed in Table 3.1-3 could occur if these actions overlap land exchange parcels in areas with paleontological potential (PFYC 3, 4, 5, or U). For the nine actions that are in operation that overlap or are near the land exchange parcels, limited or no additional ground disturbance is anticipated in previously undisturbed areas, and human activity would be anticipated to continue at current levels, so these actions are unlikely to directly impact paleontological resources. An estimated 13,480 acres of land could be impacted by other reasonably foreseeable projects with proposed new ground disturbance, increased human activity, or land use changes that intersect or overlap land exchange parcels. However, not all of these lands would possess paleontological potential (PFYC 3, 4, 5, or U), and these projects would also require a decision from the BLM, SITLA, and/or UDOT (in the case of reasonably foreseeable road construction) prior to approval. Therefore, it is anticipated that these projects would have detailed paleontological assessments prior to project authorization due to agency policies (e.g., NEPA analysis and UDOT's memorandum of understanding (MOU) with the UGS) and any impacts would be mitigated, where applicable, for paleontological resources as required by SITLA and BLM policies, standards, and guidance.

Reasonably foreseeable land actions that could occur after the land exchange could add approximately 53,071 acres of disturbance to lands with paleontological potential (see Table 3.13-6). Given the above requirement for detailed paleontological assessments and mitigation, however, no appreciable cumulative effects on paleontological resources are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions. If previously unrecorded paleontological resources are identified, future activities could contribute cumulatively to an increase in the knowledge of paleontological data in the area.

3.14 Recreation

BLM and SITLA lands provide a wide array of recreational settings and experiences across the jurisdiction of nine BLM FOs and four SITLA offices. Recreational activities provided on these lands (both BLM and SITLA) include camping, hunting, hiking, OHV use, target shooting, and other activities.

3.14.1 Affected Environment

BLM and SITLA–administered lands are accessible by the public for recreational use consistent with applicable regulations. Recreation management areas are the BLM's approach for managing recreational use of public lands, and the BLM designates these areas as either special recreation management areas (SRMAs) or extensive recreation management areas (ERMAs). Although both management areas support recreational activities, SRMAs contain unique and distinctive recreation values that the BLM manages to enhance targeted activities, experiences, benefits, and recreation-setting characteristics. BLM manages lands not designated as recreation management areas to meet basic recreation and visitor services and resource stewardship needs.

3.14.1.1 Parcel-Specific Conditions

As described in Table 3.14-1, recreation areas present on land exchange parcels would be subject to a variety of management classifications and provide varied opportunities for public recreation.

Table 3.14-1. Recreation in the Analysis Area

Recreation Location	Description	Parcels Where Present
Salt Lake ERMA (Rich, Summit, Utah, and Wasatch Counties)	The ERMA contains 1,003,221 acres of public land and generally allows for dispersed recreation, but recreation is not a priority use of public lands. An outfitter and guide special recreation permit has been issued for commercial guided hunts in the Rich County area. Parcel 6 contains a popular dispersed recreation area that is: 1) within the analysis area for the Trails Development EA, 2) adjacent to Utah High School cycling league mountain bike race route area, 3) within Eagle Mountain proposed trails area, and 4) within an area popular for target shooting. Southern and western portions of parcel 17 are adjacent to Wasatch Mountain State Park. The northern portion of parcel 20 is adjacent to a state wildlife reserve/management area.	1, 2, 2S, 3, 3S, 4, 5, 5S, 6, 15–20
Beaver County	Parcels contain no designated recreation sites but are used for dispersed recreation such as hunting and vehicle exploration.	9–13, 42–44

Recreation Location	Description	Parcels Where Present
Price ERMA (Carbon and Emery Counties)	The ERMA encompasses 1,362,760 acres: • Parcel 21 contains limited recreation opportunities; there is less than 1 mile of Facility Asset Management System roads within these parcels, but public access to those roads is restricted due to private land ownership and gates prior to accessing these parcels. Some hunting likely occurs within these parcels, but access is limited to hike-in only, and the parcel is relatively small when compared to the entire hunting unit. • Parcel 26 contains over 2 miles of designated routes that are primarily used by the public to access Millsite Reservoir, lands managed by the U.S. Forest Service, Millsite State Park. This parcel currently receives a high amount of recreational use. • Parcel 28 contains approximately 10 miles of designated routes that are primarily used by the public as OHV trails to access and view old mining sites and participate in rock hounding activities. One route serves as a connector trail to the San Rafael Desert via an underpass for safely crossing Interstate 70. • Parcels 46 and 48 contain approximately 5 miles of designated routes, including the Turtle Canyon Road, which serves as the only unrestricted access road to Turtle Canyon and Desolation Canyon Wilderness Areas, as well as lower Range Creek. The primary recreation activities associated with these parcels are hunting, camping, wildlife viewing, hiking, and OHV riding. These parcels (in particular the parcels along Turtle Canyon Road) currently receive a moderate amount of recreation use. • There is just over 1 mile of designated route within parcels 49 and 50, which is primarily used to access the bench tops. • Parcel 54 contains approximately 7 miles of designated routes, and they are primarily used by the public as OHV trails and to access range developments. One route serves as a connector route to access other trails.	21, 26, 28, 46, 48, 49, 50, 54
South Moab SRMA and Upper Spanish Valley Mountain Bike Focus Area (San Juan County)	This area is under development by the BLM, in cooperation with San Juan County, as a recreation facility with a special emphasis on its ability to host high school mountain bike races.	32

Recreation Location	Description	Parcels Where Present
Fivemile Pass Recreation Area (Tooele County)	Fivemile Pass is a popular OHV and dispersed camping area that was designated a special area with a fee and permit system in December 2021. The area has limited facilities, including graded OHV staging areas and vault toilets; however, no existing infrastructure is present within the parcel itself. See Section 3.17 for additional discussion of the Fivemile Pass Recreation Area.	34
Sheeprock/Tintic Off-Road Vehicle Area (Juab County)	Parcels lie within the Sheeprock/Tintic Off-Road Vehicle Area. The area is a popular destination for camping, hunting, and OHV use.	35, 38, 39, 40, 38S
McCoy Flats Trail System (Uintah County)	Parcels are in close proximity to the McCoy Flats Trail System. The trail system offers 35 miles of interconnecting loops for riders of all skill levels. See Section 3.17 for additional discussion of the McCoy Flats Trail System.	SE107–111
Range Creek SRMA (Emery County)	Parcels contain no recreation areas but are surrounded by the Range Creek SRMA. The SRMA offers wildlife viewing, hiking, horseback riding, and photography as well as spectacular canyon views.	SE112–114, SE116–119, SE122, SE126
Desolation Canyon SRMA (Emery County)	Most affected parcels contain no recreation areas but are surrounded by the Desolation Canyon SRMA. Parcels SE134 and SE146 lie partially within the Desolation Canyon SRMA. Desolation Canyon serves as a popular multiday whitewater boating run along the Green River. The SRMA contains scenic canyons and opportunities for a variety of passive and active recreation, including hiking and motorized recreation.	SE120, SE121, SE129, SE134, SE139, SE144–146
Labyrinth Canyon SRMA (Emery County)	Parcels contain no recreation areas but are surrounded by the Labyrinth Canyon SRMA. Labyrinth Canyon is a popular multiday whitewater boating run on the lower Green River, The SRMA contains scenic canyons and opportunities for a variety of passive and active recreation, including hiking and motorized activities.	SE152–156, SE158A, SE159, SE160A
Dirty Devil/Robber's Roost SRMA (Wayne County)	Parcels contain no recreation areas but are adjacent to the Dirty Devil/Robber's Roost SRMA. The SRMA provides remote hiking and canyon viewing experiences.	SE157B, SE158B and SE160B

Recreation Location	Description	Parcels Where Present
San Rafael Swell SRMA and San Rafael Swell Recreation Area	Most affected parcels contain no recreation areas but are surrounded by the San Rafael Swell SRMA and/or the newly designated San Rafael Swell Recreation Area. SE162 also contains the Wedge Camping Area. Parcels SE164, SE165, SE184, SE281, and SE285 lie within or partially within the San Rafael Swell SRMA. Parcel SE281 contains the Behind the Reef trailhead. Parcel SE285 contains the Little Wild Horse trailhead and recreation site within the San Rafael Swell SRMA. The SRMA provides varied recreational experiences, including hiking, biking, four-wheel driving, horseback riding, canyoneering, and river running. The Devil's Racetrack route was one of four areas within the designated San Rafael Swell Recreation Area where OHV use would continue. The San Rafael Swell Recreation Area offers varied recreation activities such as hiking, biking, four-wheel driving, horseback riding, canyoneering, and river running. See Section 3.17 for additional discussion of the San Rafael Swell Recreation Area.	SE161–165, SE167, SE172–202, SE203A, SE204–205, SE206A, SE207–212, SE213A, SE214–215, SE216A, SE217–223, SE224A, SE225–278, SE280A SE281–282, SE283A, SE284A, SE285–286, SE287A, SE288A, SE289–290, SE291A, SE292A, SE294
Red Cliffs SRMA	Parcels are located within the SRMA. The SRMA offers more than 130 miles of designated hiking, mountain biking, and equestrian trails that are available for public use.	3C–3E,7A–7C

BLM-administered public lands are designated as limited to existing roads and trails with some areas with other restrictions, such as limited to certain times or in certain areas, for OHVs in most BLM parcels included in the land exchange. Access is open or unclassified for remaining parcels (parcels 1, 2, 4, 5, 15, 17, 20, 2S, 3S, and 5S).

3.14.1.2 Management Framework

The FLPMA contains the BLM's general land use management authority over the public lands and establishes outdoor recreation as one of the principal multiple uses of those lands. Recreation use on BLM lands is managed by RMPs, which establish objectives for recreation and visitor services. In general, these plans seek to meet diverse visitor outdoor recreation demands while maintaining conditions needed to conserve public lands, so the visitor's desired recreation choices remain available.

On SITLA lands, right-of-entry permits are not required for noncommercial activities, including hunting, fishing, wildlife viewing, short-term and low-impact camping, hiking, horseback riding, as well as biking and OHV use in designated areas. Given this, these activities can occur on these lands in a similar way to the BLM-administered lands. Other uses, including commercial ones, would require a right-of-entry permit.

3.14.2 Proposed Action

The land exchange would result in no net change in publicly owned land available for recreation use. Recreation use is generally allowed on both BLM and SITLA lands and on many parcels, lands are currently undeveloped for recreation use and only dispersed recreation uses occur. In the case of BLM parcels 1–5, 2S, 3S, and 5S, public recreation use is limited due to private land

ownership patterns, and would continue to be limited after conveyance to SITLA. Therefore, potential change in use patterns or experience would also be limited.

Dispersed recreational activities would be allowed to continue for BLM parcels transferred to SITLA located in or on the boundary of ERMAs, South Moab SRMA, and Upper Spanish Valley Mountain Bike Focus Area, Fivemile Pass Recreation Area, and the Sheeprock/Tintic Off-Road Vehicle Area. SITLA allows dispersed noncommercial recreation to occur on state trust lands, unless specifically excluded, under UAC R850-41-200(3); however, permits would be required for all commercial purposes and large group events. Other undesignated BLM lands transferred to SITLA would continue to allow for motorized access. As discussed in Section 3.10, the BLM has issued road ROWs to itself in order to preserve access to adjacent public lands. SITLA and equalization parcels (if needed for value equalization purposes) being transferred to BLM that are within or near existing SRMAs (Range Creek, Desolation Canyon, San Rafael Swell, Red Cliffs) would allow for more contiguous land units to manage for desired recreation outcomes. This conveyance would allow for more comprehensive management of recreation areas and could lead to an increase in user experience within the SRMAs. Similar outcomes would occur for SITLA parcels being transferred to BLM that are fully within designated wilderness. This consolidation would allow for more contiguous designated wilderness areas and increase opportunities for primitive recreation opportunities (see Section 3.17 for more details).

Emery County has applied to SITLA for numerous road ROWs along existing roads on the SITLA parcels in order to preserve motorized access after the land exchange is complete. BLM was given an opportunity to review the request and provided comments back to SITLA.

Lands currently held by SITLA allow e-bike usage; this use may no longer be permitted once parcels are conveyed to BLM if those areas are designated for non-motorized use. For example, the land exchange would add five SITLA parcels to the McCoy Flats Trail System. This conveyance would not adversely impact mountain biking because the trails would still be available; however, e-bike use would not be allowed.

Reasonably foreseeable construction and operation activities—i.e., potential residential, energy, recreation, and industrial development; mineral exploration; and underground coal mining operations (Table 3.14-2)—that could occur after the land exchange, if implemented on BLM parcels, could reduce or eliminate lands available for recreation or alter the quality of recreation opportunities, such as through increases in noise or changes to the viewshed; however, impacts would be minimized due to the availability of other public lands and access roads that are contiguous with or adjacent to these parcels and which could continue to provide recreation opportunities. No SRMAs would be impacted.

Table 3.14-2. Reasonably Foreseeable Future Land Uses and Acreages by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Recreation Areas (acres affected, percentage of total recreation area)
6, 15	Residential development	Salt Lake ERMA (180 acres, <1%)
9–13	Solar energy development	Fillmore ERMA and Beaver County lands (3,000 acres, <1%)
17, 26	Recreational development	Salt Lake and Price ERMAs (1,184 acres, <1%)
28	Industrial development	Price ERMA (4,880 acres, <1%)

Parcels	Reasonably Foreseeable Future Land Use	Recreation Areas (acres affected, percentage of total recreation area)
34–35, 38–40, 42–44, 54, including 38S	Mineral exploration	Fivemile Pass Recreation Area, Sheeprock/Tintic Off-Road Vehicle Area, Beaver County lands, and Price ERMA (35,385 acres, <2%)
46, 48–50	Underground coal mining operations	Price ERMA (5,354 acres, <1%)

Note: Table excludes parcels only conveying subsurface mineral rights or with no designated recreation land. Acreage conservatively assumes that recreation can occur throughout each parcel.

Future land uses on SITLA parcels and equalization parcels (if needed for value equalization purposes) would generally involve natural and cultural resources protection, recreation use, and continuation of existing encumbrances as established in the Dingell Act. Therefore, reasonably foreseeable actions on SITLA and equalization parcels after conveyance (see Table 3.1-2) would not adversely or beneficially affect recreational access or opportunities beyond the general effects discussed above.

3.14.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to recreational access or opportunities due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.14.4 Cumulative Impacts) could result in impacts in the recreation analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would not affect recreational access or opportunities because any reclamation or future land activities on BLM parcels 46–50 would not be anticipated to restrict existing access to these parcels along designated routes.

3.14.4 Cumulative Impacts

Reasonably foreseeable future actions listed in Table 3.1-3 would include UDOT road construction, residential development, active oil and gas leasing, prescribed burning, substation construction, energy development, and installation of distribution and telecommunication lines in the vicinity of different recreation areas: the Salt Lake ERMA, Fillmore ERMA, Price ERMA, South Moab SRMA, San Rafael Swell SRMA, and Upper Spanish Valley Mountain Bike Focus Area. These actions could occur on up to an estimated 215,831 acres of land (excluding actions already in operation or in effect), thereby reducing access to, or impacting the recreational experience of, users for these recreational areas due to increased traffic, noise, and human activity, as well as the introduction of new permanent structures in the viewshed. Of this total, however, only an estimated 13,480 acres (6%) of reasonably foreseeable future disturbance would directly overlap or intersect land exchange parcels. Conversely, 35 miles of mountain bike trail expansion at Little Cedar Mountain (near the San Rafael Swell SRMA), along with an estimated 2 to 3 acres of equestrian trailhead development at Fivemile Pass and campground construction at McCoy Flats, could beneficially increase recreational opportunities at these locations over the long term. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Reasonably foreseeable land actions that could occur after the land exchange, if implemented, could generate an estimated 49,983 acres of disturbance on BLM parcels (Table 3.14-2), further

reducing or eliminating lands available for recreation or alter the quality of recreation opportunities near parcels 6, 9–13, 15, 17, 26, 28, 34, 35, 38–40, 38S, 42–44, 46, 48, 49, 50, and 54. For context, however, the combined disturbance associated with reasonably foreseeable land actions and other development would impact less than 2% of lands providing dispersed and designated recreation opportunities.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Further, conveyance of SITLA parcels would allow for more comprehensive management of SRMAs by consolidating land units under BLM. Therefore, no appreciable cumulative effects on recreation are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.15 Socioeconomics

Socioeconomic assessments evaluate the interaction between proposed actions and the social and economic characteristics of communities that could be affected. Socioeconomic indicators often evaluated include population levels, employment, demand for public services and government revenues. This analysis describes and evaluates land exchange impacts to socioeconomic conditions within 18 counties in Utah (Beaver, Carbon, Emery, Grand, Iron, Juab, Kane, Millard, Rich, San Juan, Sevier, Summit, Tooele, Uintah, Utah, Wasatch, Washington, and Wayne Counties), hereafter referred to as the *socioeconomics analysis area*. The socioeconomic analysis area was established because most land exchange–related impacts likely to affect socioeconomic factors (for example, changes in populations or demand for public services) would be experienced by individuals residing within commuting distance of the parcels at issue. Because all parcels to be exchanged are in Utah, the state of Utah was identified as the appropriate reference area.

3.15.1 Affected Environment

Table 3.15-1 characterizes population levels and trends in the socioeconomic analysis area. Analysis area counties range in population from just over 2,600 to over 700,000, and population changes from the 2010 Census varied from an increase of 55.6 percent to a decline of 8.0 percent. Twelve of the counties had lower population growth than the State of Utah and six had a higher growth rate. Tables 3.15-2 and 3.15-3 characterize the labor force and existing economic activity in affected counties. Table 3.15-4 summarizes land ownership by county. This information helps place the acreage associated with the exchange, as reported in Tables 2.1-1 and 2.1-3, in context.

Table 3.15-1. Population

State/County	Total Population	Population (2020 Census)	Population (2010 Census)	Overall Population Change (2010 – 2022)
State of Utah	3,380,800	3,271,616	2,763,885	22.3%
Beaver	7,327	7,072	6,629	10.5%
Carbon	20,571	20,412	21,403	-3.9%
Emery	10,099	9,825	10,976	-8.0%
Grand	9,769	9,669	9,225	5.9%
Iron	62,429	57,289	46,163	35.2%

State/County	Total Population	Population (2020 Census)	Population (2010 Census)	Overall Population Change (2010 – 2022)
Juab	12,567	11,786	10,246	22.7%
Kane	8,227	7,667	7,125	15.5%
Millard	13,330	12,975	12,503	6.6%
Rich	2,628	2,510	2,264	16.1%
San Juan	14,359	14,518	14,746	-2.6%
Sevier	22,069	21,522	20,802	6.1%
Summit	43,036	42,357	36,324	18.5%
Tooele	79,934	72,698	58,218	37.3%
Uintah	37,141	35,620	32,588	14.0%
Utah	702,434	659,399	516,564	36.0%
Wasatch	36,619	34,788	23,530	55.6%
Washington	197,680	180,279	138,115	43.1%
Wayne	2,645	2,486	2,778	-4.8%

Source: U.S. Census Bureau (2023).

Apart from San Juan County, which has a high proportion of individuals who are unemployed, county-level unemployment rates are similar to the state. In contrast, 15 of 18 counties in the affected environment have a higher rate of employment in agriculture, forestry, fishing and hunting, mining, and the industry sector. Industries directly dependent upon natural resources may be more susceptible to changes in the environment, climate shifts, and natural disasters. The socioeconomic analysis area generally has a diverse economy with no single industry employing more than 36.4 percent of a county's workforce. The proportion of individuals participating in the labor force is below the state level in 13 of the 18 counties. These differences are often indicative of a rural setting with an aged population.

The land exchange parcels are either held by the Utah land trust and managed by SITLA or owned by the federal government and managed by BLM. The Utah land trust came into being in 1896 when congress granted land to the new state with the provision that revenue earned from the sale or lease of the land be placed into permanent endowments designated to benefit specific institutions involved in education, healthcare, juvenile justice, and infrastructure development. Today, SITLA manages Utah's 3.4 million acres of trust lands, approximately 6% of the total acreage in Utah (SITLA 2022b). Since 1994, SITLA has generated $1.96 billion in revenue which is allocated between designated beneficiary institutions noted above (SITLA 2022b).

The BLM manages nearly 22.8 million acres of public lands in Utah. This federally owned land represents approximately 42% of the state. BLM is charged with protecting natural, historical and cultural resources for future generations. They also provide opportunities for responsible mineral and energy development and grazing. BLM generates revenue by charging lease/permit and extraction fees. Some of this revenue is returned to the state with BLM reporting payments to Utah of $603,462 arising from revenue generated on BLM lands in 2021 (BLM 2021c).

3.15.1.1 Parcel-Specific Conditions

Sections 3.9, 3.10, 3.11, 3.14, and Appendix A characterize the range of economic activities (grazing, mining, recreating, etc.) that currently occur on land exchange parcels.

Table 3.15-2. Labor Force Statistics for the Analysis Area

State/County	Population 16 Years and Over	In Labor Force Total	In Labor Force Civilian Total	In Labor Force Civilian Employed	In Labor Force Civilian Unemployed	In Labor Force Armed Forces	Not in Labor Force
State of Utah	2,391,727	69.1%	68.9%	66.5%	2.4%	0.2%	30.9%
Beaver	4,895	62.2%	62.2%	59.0%	3.2%	0.0%	37.8%
Carbon	15,568	56.8%	56.8%	52.9%	3.8%	0.0%	43.2%
Emery	7,361	54.9%	54.8%	52.5%	2.3%	0.1%	45.1%
Grand	7,966	69.6%	69.6%	68.8%	0.8%	0.0%	30.4%
Iron	41,856	63.0%	63.0%	60.3%	2.6%	0.1%	37.0%
Juab	8,061	66.5%	66.4%	64.8%	1.6%	0.1%	33.5%
Kane	6,182	58.9%	58.5%	56.4%	2.0%	0.4%	41.1%
Millard	9,232	61.6%	61.6%	59.7%	1.9%	0.0%	38.4%
Rich	1,757	53.7%	53.7%	52.0%	1.7%	0.0%	46.3%
San Juan	10,824	55.3%	55.3%	49.2%	6.1%	0.0%	44.7%
Sevier	15,973	60.5%	60.5%	57.2%	3.3%	0.1%	39.5%
Summit	33,424	70.4%	70.3%	69.0%	1.3%	0.0%	29.6%
Tooele	51,290	71.6%	71.2%	68.3%	2.9%	0.3%	28.4%
Uintah	25,262	59.5%	59.5%	55.7%	3.7%	0.0%	40.5%
Utah	456,379	70.4%	70.3%	67.80%	2.50%	0.10%	29.60%
Wasatch	24,708	70.7%	70.5%	68.9%	1.6%	0.3%	29.3%
Washington	136,420	56.6%	56.6%	54.8%	1.8%	0.0%	43.4%
Wayne	2,014	57.2%	57.2%	56.9%	0.3%	0.0%	42.8%

Source: U.S. Census Bureau (2022b).

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Table 3.15-3. Employment by Industry in the Analysis Area

State/County	Total Civilians Employed	Agriculture, Forestry, Fishing and Hunting, Mining	Construction	Manufacturing	Wholesale Trade	Retail Trade	Transportation and Warehousing, Utilities	Information	Finance and Insurance, Real Estate, Rental and Leasing	Professional, Scientific, Management, Administrative, Waste Management Services	Educational Services, Health Care, Social Assistance	Arts, Entertainment, Recreation, Accommodation, Food Services	Other Services, Except Public Administration	Public Administration
State of Utah	1,590,143	1.4%	7.6%	10.2%	2.4%	11.5%	5.2%	1.9%	7.2%	12.8%	22.2%	8.4%	4.4%	4.7%
Beaver	2,888	19.5%	7.4%	9.7%	0.8%	9.4%	9.7%	0.2%	0.8%	4.2%	22.9%	6.1%	5.7%	3.7%
Carbon	8,238	8.0%	7.1%	7.2%	1.8%	10.7%	8.7%	1.6%	3.3%	7.9%	23.1%	8.6%	5.7%	6.3%
Emery	3,862	11.0%	10.6%	1.5%	3.1%	10.4%	12.1%	2.1%	4.4%	5.4%	20.2%	7.9%	5.2%	6.1%
Grand	5,480	3.0%	8.9%	2.4%	0.6%	19.8%	4.2%	0.4%	5.9%	7.5%	8.7%	30.6%	3.2%	4.8%
Iron	25,252	3.0%	10.0%	7.7%	1.7%	11.8%	4.4%	1.4%	4.5%	9.3%	24.8%	12.0%	4.6%	4.7%
Juab	5,226	4.2%	9.0%	14.9%	1.2%	7.5%	6.7%	1.7%	3.4%	7.7%	25.6%	7.7%	5.5%	4.9%
Kane	3,489	3.2%	4.0%	4.1%	0.7%	11.7%	4.6%	0.8%	4.7%	7.0%	21.6%	17.8%	13.2%	6.7%
Millard	5,513	12.3%	6.5%	8.7%	1.0%	12.0%	13.0%	0.8%	1.3%	6.4%	18.3%	9.8%	4.5%	5.3%
Rich	914	10.2%	9.5%	10.0%	3.8%	11.2%	5.9%	0.5%	7.4%	10.2%	19.5%	2.7%	6.2%	2.8%
San Juan	5,323	5.1%	9.2%	6.2%	2.5%	7.9%	5.7%	0.3%	1.1%	3.9%	36.4%	13.1%	2.3%	6.5%
Sevier	9,134	6.7%	8.0%	6.9%	1.8%	13.4%	7.1%	1.1%	1.5%	6.7%	22.1%	10.5%	4.0%	10.1%
Summit	23,062	1.2%	7.8%	5.4%	1.6%	9.7%	5.2%	2.2%	11.2%	13.9%	20.6%	15.3%	3.2%	2.8%
Tooele	35,051	2.0%	8.1%	12.5%	3.8%	13.9%	7.9%	1.2%	5.1%	11.1%	17.3%	7.8%	2.7%	6.4%
Uintah	14,081	13.5%	6.1%	3.0%	2.6%	17.2%	6.7%	1.4%	2.4%	5.4%	21.2%	10.3%	4.5%	5.7%
Utah	309,295	0.8%	7.5%	9.1%	2.4%	12.3%	3.1%	2.7%	6.1%	16.3%	24.7%	7.7%	4.4%	3.0%
Wasatch	17,012	2.7%	9.6%	5.2%	1.9%	9.2%	5.5%	1.8%	7.9%	11.5%	19.8%	16.2%	4.4%	4.4%
Washington	74,760	0.9%	10.3%	7.5%	1.7%	13.1%	5.5%	1.2%	6.2%	10.4%	24.0%	11.8%	3.9%	3.4%
Wayne	1,146	7.9%	22.1%	0.0%	0.0%	13.2%	4.7%	0.3%	0.2%	5.1%	15.8%	19.7%	4.8%	6.2%

Source: U.S. Census Bureau (2022b).

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Table 3.15-4. Land Ownership Acreage by County

State/County	Total BLM Acreage	Total SITLA Acreage	Total Private Acreage
State of Utah	18,826,166	3,343,415	11,465,173
Beaver	1,128,634	164,091	210,645
Carbon	420,759	101,437	367,582
Emery	1,399,036	333,760	235,068
Grand	1,555,329	325,580	102,645
Iron	965,032	124,517	758,661
Juab	1,369,113	164,353	375,170
Kane	353,629	95,411	275,981
Millard	2,976,858	384,343	615,566
Rich	171,424	46,107	384,729
San Juan	2,077,879	267,578	404,000
Sevier	205,040	41,545	236,883
Summit	745	8,608	643,645
Tooele	1,828,708	230,682	502,239
Uintah	1,342,473	260,600	435,636
Utah	102,677	44,218	575,313
Wasatch	1,487	15,077	248,364
Washington	502,007	68,896	285,276
Wayne	891,270	168,987	58,552

Source: SITLA. (2023b).

3.15.1.2 Management Framework

FLPMA contains the BLM's general land use management authority over public lands. It directs managers to pursue multiple-use management while balancing a range of environmental and social values, as well as to integrate "physical, biological, economic, and other sciences," and by regulation to consider "social, economic and institutional data" in developing land use plans.

Utah's 3.4 million acres of trust land are managed by SITLA to generate revenue for the designated beneficiaries through energy and mineral leases, rent, and royalties; real estate development and sales; and surface estate sales, leases, and easements.

3.15.2 Proposed Action

Under the land exchange, SITLA would convey approximately 116,000 acres of Utah trust lands and land interests to federal ownership to be managed by BLM; these lands and land interests are primarily located in newly created wilderness areas, NCAs, or the San Rafael Swell Recreation Area. In exchange, the BLM would convey approximately 89,700 acres of BLM land and land interests to the Utah land trust where it would be managed by SITLA. The overall value of the parcels exchanged is intended to be approximately equal and, as described in Section 2.1.2, six equalization parcels have been set aside for potential inclusion if needed to meet equivalency criteria.

Exchange-related impacts to environmental resources and receptors such as air, climate, water, and wildlife, as disclosed in Sections 3.2, 3.3, 3.20, and 3.23, are not expected to measurably change economic activity and socioeconomic indicators in the socioeconomic analysis area. Further, material changes to population levels, employment, and demand for public services resulting from the land exchange are generally not anticipated because 1) in many cases land use would not change (see Table 3.1-1); and 2) in those cases where parcel land use could change, the change is dependent on future market conditions, or the change to a specific parcel is unlikely to induce economic activity that would not otherwise have occurred in the region.

The primary direct impacts related to the land exchange would include potential changes in recreational value associated with wilderness areas, potential changes in government revenues, and the potential creation of non-use value.

3.15.2.1 Changes in Recreational Value

Recreational value is defined as the maximum amount of money recreators would be willing to pay to participate in a recreational activity minus the amount of money they have to pay to participate in the activity; economists often refer to this as consumer surplus.

SITLA parcels conveyed to the BLM and fully within the boundary of a designated wilderness, an NCA, or the San Rafael Swell Recreation Area would be added to, and administered as part of, those designations; these lands would be withdrawn from mineral leasing and closed to other forms of mineral development by operation of law, subject to valid existing rights. This consolidation would allow for more contiguous special management designations and would likely increase recreational value associated with wilderness and other recreational activities once the exchange is complete (see Section 3.14 for additional discussion).

The transfer of parcels not associated with wilderness areas, NCAs, or the San Rafael Swell Recreation Area is not expected to result in material changes in recreational value. This is because 1) the land exchange would not result in a material change in the amount of publicly owned land available for recreation use, 2) recreational use is allowed on both BLM and SITLA lands and 3) many parcels are currently undeveloped with only dispersed recreational uses occurring. As discussed in Section 3.5.2, the general absence of overall impacts does not preclude the potential for localized socioeconomic impacts around specific parcels; communities near such parcels could experience increased economic activity or changes to public land access.

3.15.2.2 Taxes and Government Revenue

BLM would forego mineral and grazing revenue that might otherwise have been earned from the designated land and land interest on parcels transferred to SITLA. In the short term, these losses are expected to be at least partially offset by the revenue from leases present on parcels conveyed to BLM. The BLM would administer these leases through the remainder of their current term; however, future renewal would be subject to BLM rates, policies, and provisions. In the long term, parcels conveyed to the BLM and fully within the boundary of a designated wilderness, NCA, or the San Rafael Swell Recreation Area will be withdrawn from mineral leasing and closed to other forms of mineral development by operation of law. Therefore, revenue to BLM would likely decrease relative to the revenue that would be realized if the land exchange did not occur (see Section 3.9 and 3.11 for additional discussion).

SITLA would also forego revenue that might otherwise have been earned from the designated land and land interest on parcels transferred to the BLM; however, because the BLM parcels that

SITLA would receive in exchange are characterized as 1) having revenue-producing potential and 2) being located outside of special management areas, which can limit revenue-generating enterprises, SITLA-generated revenue would likely increase to a level greater than would be realized had the land exchange not occurred.

Under the land exchange, changes to Payments in Lieu of Taxes (PILT) payments to counties would be nominal or potentially unchanged, based on PILT calculation factors during the fiscal year in which this exchange would occur. Furthermore, under 31 USC 6902(b)(3), each county could also receive PILT payments for the SITLA lands that would be conveyed to the BLM, if they are currently entitled to PILT payments from the State of Utah for the lands, although these payments would be limited to the payment that would have been made under applicable state law.

3.15.2.3 Changes in Non-use Value

Non-use value is defined as the value that people assign to economic goods (including things such as wild places) even if they never have and never would use or benefit from the good in question.

Non-use value would increase if the wellbeing of individuals not planning to use or directly benefit from the parcels increases because of the exchange. An increase in such wellbeing could be associated with 1) increasing the continuity of designated wilderness areas, NCAs, or the San Rafael Swell Recreation Area and/or 2) increasing the level of revenue provided to SITLA's designated beneficiaries because of the land exchange. Thus, the exchange could bring about an increase in non-use value.

3.15.3 No Action

Under the No Action, the land exchange would not occur, and if the federal coal leasing moratorium is lifted, changes to land ownership and permitted uses due to reasonably foreseeable land actions that could occur after the land exchange would not affect socioeconomic conditions. The activities that currently occur on the parcels, and the revenue and wellbeing they generate, would likely continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance.

As discussed in Sections 3.2 and 3.3, if the coal leasing moratorium is not lifted, reported criteria, HAPs, and GHG emissions would be reduced for BLM parcels 46–48 and 46C, which could benefit communities in the vicinity. Potential sources of energy substitution at the Hunter and Huntington coal-fired power plants, which use coal from the Lila Canyon Mine, would likely consist of natural gas or renewable energy sources. These sources would result in a long-term GHG reduction, which could also benefit communities in the vicinity.

3.15.4 Cumulative Impacts

Current and future development activities, such as those described in Table 3.1-3 and could provide employment opportunities and stimulate economic activity in the socioeconomic analysis area. Future residential development, energy generation, communication installations, and other construction actions could also result in increases in noise, traffic, and human activity, or alter access to public land (see Section 3.14 for additional details).

The land exchange would increase potential non-use values and recreational value through the consolidation of designated wilderness areas. Although the revenue to BLM is likely to decrease relative to the revenue that would be realized if the land exchange did not occur, SITLA-generated revenue is likely to increase to a level greater than would be realized had the land exchange not occurred.

Individual communities near land exchange parcels likely to experience a land use change may also experience localized socioeconomic changes; Table 3.5-2 identifies these parcels and groups them by expected type of land cover change.

Cumulatively, the land exchange and other reasonably foreseeable development activities are likely to stimulate local economic activity and provide employment opportunities. These impacts may place demands on local governments, which would be, at least in part, offset by increased government revenues associated with the increased economic activity. Such development could also result in localized increases in noise, traffic, and human activity and alter access to public land.

3.16 Soils and Farmland

Soil is the unconsolidated mineral or organic material on the immediate surface of the earth that serves as the natural medium for plant growth. A productive soil can sustain biological productivity, maintain environmental quality, and promote plant and animal health. The Farmland Protection Policy Act (7 USC 4201 and 7 CFR Part 658) defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.

3.16.1 Affected Environment

3.16.1.1 Parcel-Specific Conditions

There are over 300 different mapped soil units within the *soils and farmland analysis area*. The 20 most common units on BLM parcels with potential to be impacted by future land use changes are shown in Table 3.16-1 (Natural Resources Conservation Service 2022). Soil limitations for each unit were identified as follows:

- Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Soil K factors were used to group soils into slight (0.05 to 0.20), moderate (0.25 to 0.40), and severe (> 0.40) water erosion classes.
- Wind erodibility groups (WEGs) are made up of soils that have similar properties affecting their resistance to soil blowing in cultivated areas. Soils within the 1 and 2 WEGs are classified as having a severe limitation for wind erosion; soils in the 3, 4, and 4L WEGs are considered to have a moderate limitation for wind erosion; and soils in the 5, 6, and 8 WEGs have a slight limitation for wind erosion.
- The hydrologic soil group (HSG) classifies soils according to their runoff-producing characteristics. Soils within HSG A are considered to have a low runoff potential; HSG B soils have a moderate runoff potential; and HSG C and D soils are considered to have a high runoff potential.

Biological soil crusts and fragile or erodible soils have been identified on some BLM parcels (21, 23–30, 46–50, 53, 46C), although potential for occurrence on other parcels cannot be discounted.

Soil crusts include mats or filaments of cyanobacteria, lichens, and mosses that play a major role in reducing soil erosion by both wind and water, fixing atmospheric nitrogen, retaining soil moisture, and providing a living organic surface mulch. A study of soil erosion in the Walker Flat tract of the existing Emery Deep Mine (encompassing BLM parcels 49 and 50) noted that most of the area had slight erosion potential, whereas moderate to high erosion potential was present on steeper bench side slopes (Long 2020).

Table 3.16-1. Common Soils on BLM Parcels

Soil Units	Acres	WEG	Water Erosion (K factor)	Runoff Potential	Hydric Soil?	Parcels
Jericho gravelly fine sandy loam, 4 to 15 percent slopes	5,354	5	0.15	D	No	35, 38, 39, 38M, 38S, 39S
Shabliss very fine sandy loam, 2 to 5 percent slopes	4,413	3	0.37	D	No	38, 39, 38M, 38S, 39S
Borvant cobbly loam, 2 to 8 percent slopes	3,909	5	0.24	D	No	8, 35–39, 35M, 38M, 38S, 39S
Monue-Bluechief families complex, 0 to 6 percent slopes	2,642	3	0.32	A	No	54
Wales loam, dry, 2 to 4 percent slopes	2,503	6	0.37	C	No	38, 39, 38S, 39S
Yenrab-Uffens complex, 0 to 10 percent slopes	2,451	3	0.15	A	No	51M, 52M
Rangecreek-Skein-Rabbitex complex, 6 to 45 percent slopes	2,391	5	0.1	D	No	46, 47, 48, 46C
Chipeta-Persayo-Killpack complex, 3 to 20 percent slopes	1,711	4L	0.37	D	Yes	23, 24, 25, 28, 30, 49, 50
Doyce silt loam, loamy substratum, 2 to 4 percent slopes	1,664	6	0.32	C	Yes	35, 38, 35M
Hiko Peak stony sandy loam, 15 to 25 percent slopes	1,646	5	0.05	B	No	38, 39, 38S
Persayo-Casmos-Badland complex, 3 to 30 percent slopes	1,549	5	0.24	D	No	23, 24, 25, 28, 30
Hanksville-Chipeta complex, 1 to 12 percent slopes	1,542	4L	0.37	D	No	23, 28, 29, 30
Sumine-Reywat-Rock outcrop complex, 30 to 60 percent slopes	1,443	7	0.05	D	No	36–38
Juab loam, 2 to 4 percent slopes	1,177	4L	0.28	B	No	35, 36, 38, 35M, 38M, 38S
Lodar-Lundy-Rock outcrop association, 30 to 60 percent slopes	1,054	6	0.10	D	No	34
Amtoft family-Rock outcrop complex, 5 to 50 percent slopes	964	8	0.28	D	No	41

Soil Units	Acres	WEG	Water Erosion (K factor)	Runoff Potential	Hydric Soil?	Parcels
Wallsburg-Rock outcrop complex, 25 to 70 percent slopes	955	8	0.10	D	No	36
Gerst-Strych-Badland complex, 30 to 70 percent slopes	600	6	0.1	D	No	26, 27, 46, 47
Persayo-Vickel complex, 3 to 12 percent slopes	920	5	0.2	D	No	23, 24, 25, 28, 30
Goshute-Dera-Uvada families association, 0 to 8 percent slopes	868	6	0.28	D	Yes	41

Note: N/A = not applicable.

Table 3.16-2 provides a summary of mapped farmland present on BLM, SITLA, and equalization parcels. For context, as of 2022 the State of Utah contained more than 10 million acres of land supporting active farm operations (USDA 2022).

Table 3.16-2. Farmland Present in the Analysis Area

Farmland Category	Acres	Parcels
Farmland of local importance	286	2, 4, 5, 5S
Farmland of statewide importance	590	1, 2, 3, 8, 32, 34, SE150B
Prime farmland (if irrigated)	9,423	1, 2, 3, 6, 25, 26, 27, 32, 35, 36, 38, 39, 46, 47, 48, 49, 50, 53, 2S, 35M, 38M, 38S, 39S, 3S, 46C, 53M, 53OG, SE111, 3C, 3E, 7C

3.16.1.2 Management Framework

The BLM does not have any specific legislation that provides for soil protection; however, as acknowledged in the *Bureau of Land Management Soil Resource Program Strategy: Focus on the Challenge, 2015–2020*, "soils are intricately linked to the Clean Water Act and Clean Air Act, and soil conservation is specifically cited in NEPA, FLPMA, Taylor Grazing Act of 1934, Bankhead Jones Farm Tenant Act of 1937, and Farmland Protection Policy Act of 1981" (Davis et al. 2015). The BLM is also required to follow standards and guidelines consistent with the fundamentals of rangeland health (43 CFR 4180.1).

No specific soils management direction was identified for SITLA; however, the agency's mission is "Administering trust lands prudently and profitably for Utah's schoolchildren and other trust beneficiaries" (SITLA 2022b). This includes the preservation of trust assets for future beneficiaries.

3.16.2 Proposed Action

Under the land exchange, a total of approximately 89,700 acres of soils and 10,005 acres of prime farmland or farmland of state or local importance would be present on BLM parcels transferred to SITLA and up to approximately 116,000 acres of soils and 275 acres of prime farmland would be present on SITLA and equalization parcels (if needed for value equalization purposes) that could be transferred to the BLM. Of this total, potential changes in future land uses on 46 parcels conveyed to SITLA (64,439 acres of soil) could result in changes to structure, health, and function of soil resources, if implemented. BLM parcels 23, 24, 25, 28-30, 38, 39, 38S, 39S, 49, and 50, in particular, have more susceptibility to soil erosion by water, and would

be at increased risk due to future land-disturbing activities. Most BLM parcels also have high runoff potential.

Construction and site disturbance associated with reasonably foreseeable residential, energy, recreation, water supply, and industrial development; mineral exploration; underground coal mining operations; and oil and gas leasing that could occur after the land exchange (see Table 3.1-1) could result in vegetation clearing and grading of structure sites for construction, equipment laydown, and vehicle access, and excavation for structure placement. These actions could disturb soils and increase soil erosion potential, even on soils with a low risk of erosion, because roots help to hold soil in place, and low-lying vegetation impedes the velocity of surface flow of water. Future land actions could also affect soil productivity due to loss or mixing of organic matter or soil compaction during site preparation. Spills could also occur during construction from earth-moving and other heavy equipment. However, any construction activities that disturb 1 or more acres of land would require authorization under the Utah Pollutant Discharge Elimination System. As part of this authorization, a storm water pollution prevention plan would be required that includes erosion and sediment controls and spill prevention.

Impacts to prime farmland if future actions are implemented on BLM parcels conveyed to SITLA could include soil mixing, rutting, and soil compaction. Conversion of prime farmland could also occur if future land use activities remove farmland (directly or indirectly) and replace i with nonagricultural uses. Because these actions would occur without federal assistance or funding, farmlands would not be provided with any protections under the Farmland Protection Policy Act. However, acres potentially impacted with the land exchange are negligible as compared to total acres of farmland in Utah.

Future land uses on all SITLA parcels conveyed to BLM or equalization parcels, if needed for equalization value purposes, would generally involve natural and cultural resource protection, recreation use, and continuation of existing encumbrances as established in the Dingell Act. Conveyance of SITLA parcels to BLM could also provide a benefit by creating a more contiguous ecosystem for management and oversight for soil resources. Therefore, reasonably foreseeable actions on SITLA and equalization parcels after conveyance (see Table 3.1-2) would not adversely affect soil resources.

3.16.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to soil resources due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.16.4 Cumulative Impacts) could result in impacts in the soils and farmland analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit soil resources in the short term because reclamation of BLM parcels 46–50 and 46C could decrease subsurface disturbance and human activity caused by mining activities. However, future land uses after reclamation is complete could reintroduce the risk of soil erosion, contamination, or reduced soil productivity if they cause surface and subsurface disturbance.

3.16.4 Cumulative Impacts

Up to an estimated 232,405 acres of reasonably foreseeable trends and actions (excluding actions already in operation or in effect) in the vicinity of the soils and farmland analysis area, such as renewable energy development, residential development, hydrogen, geothermal, and oil and gas generation, pipeline, telecommunications, and transportation construction activities (as described in Table 3.1-3), could cause short- to long-term impacts through surface and subsurface soil disturbance, as well as subsurface impacts associated with boring and installation of pilings and other infrastructure, as well as potential for infiltration of contaminants and leaks. Of this total, however, only an estimated 13,480 acres (6%) of reasonably foreseeable future disturbance would directly overlap or intersect land exchange parcels. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Reasonably foreseeable land actions that could occur after the land exchange, if implemented, would add 64,439 acres of soil or 8,935 acres of farmland impacts in the vicinity of parcels 6, 8–15, 17, 23–30, 33–44, 46–50, 53, 54, 35M, 38M, 38S, 39S, 46C, 51M–53M, and 53OG due to soil disturbance, changes to soil productivity, compaction, or erosion. For context, however, the combined disturbance associated with reasonably foreseeable land actions and other development after the land exchange would affect less than 1% of mapped soils on BLM-administered lands in the 18-county land exchange. All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Therefore, no appreciable cumulative effects on soils are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.17 Special Management Designations, Lands with Wilderness Characteristics, and Natural Areas

This EA analyzes potential impacts associated with the land exchange to units of the BLM's National Conservation Lands[18] (wilderness and WSAs, national monuments, NCAs, and WSR);[19] to administrative designations like areas of critical environmental concern (ACECs); and to inventoried lands with wilderness characteristics (LWC), including natural areas and other designations. For convenience, this EA references these general categories of lands as "special management designations, LWCs, and natural areas" even though the latter two would not be considered formal designations, per se. The analysis area for this section includes the parcels to be exchanged and any special management designations, LWCs, and natural areas that overlap with or are adjacent to these parcels (a special management designations, LWCs, and natural areas mapset is provided in Appendix C).

[18] The BLM's National Conservation Lands are formally known as the National Landscape Conservation System, which was established in Section 2002 of Public Law 111-11, Omnibus Public Land Management Act of 2009 (16 USC 7202). For convenience, this EA refers to this system as the National Conservation Lands throughout.
[19] Although national historic and scenic trails are considered units of the BLM's National Conservation Lands, potential impacts to NHTs are analyzed individually in Section 3.12.

3.17.1 Affected Environment

3.17.1.1 Parcel-Specific Conditions

3.17.1.1.1 Areas of Critical Environmental Concern

An ACEC is defined as "an area within public lands where special management attention is required . . . to protect and prevent irreparable damage to important historical, cultural, or scenic values; fish and wildlife; or other natural systems or processes, or to protect life and safety from natural hazards" (43 CFR 1601.0–5(a)). Permissible activities within ACECs generally depend on the resources and values that the designation was meant to protect. ACECs present in the special management designations, LWCs, and natural areas analysis area includes the Uranium Mining Districts – Tidwell Draw ACEC (parcel 28) and the Uranium Mining Districts – Lucky Strike ACEC (parcel SE226). These ACECs contain important mining sites associated with the development of uranium as part of U.S. efforts during the escalation of the Cold War during the 1950s. Currently, the history of these sites can only be retrieved by studies of the resources on the ground and oral histories.

3.17.1.1.2 Wilderness and Wilderness Study Areas

The 1964 Wilderness Act mandates that wilderness be managed so its community of life is untrammeled by man, its primeval character is retained, and its natural conditions are preserved. Wilderness character is the combination of biophysical, experiential, and symbolic qualities that distinguish wilderness from all other lands. Wilderness character also includes five tangible qualities associated with the biophysical environment: natural quality; untrammeled quality; undeveloped quality; and outstanding opportunities for solitude or primitive and unconfined recreation quality. The BLM's policy is to maintain wilderness in such a manner that ecological systems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces (BLM 2012a). Additionally, it is the BLM's policy to manage and protect WSAs to preserve wilderness characteristics so as not to impair the suitability of such areas for designation by Congress as wilderness (BLM 2012b).

In all, 70,750 acres of wilderness areas are in the special management designations, LWCs, and natural areas analysis area; no WSAs are currently present within the analysis area because the Dingell Act generally converted the WSAs that existed prior to enactment to designated wilderness and released the remainder from WSA status. Each wilderness area represents a distinctive place that is currently managed to preserve, protect, and maintain its wilderness character. Primitive recreational activities, such as hiking, backpacking, camping, canyoneering, and hunting, are permitted. In addition to recreation, these wilderness areas have potential for climbing, geological study, and the study of historic and prehistoric cultures.

Specific wilderness areas present in the analysis area are described in Table 3.17-1.

Table 3.17-1. Wilderness Areas Present in Analysis Area

Wilderness Area	Total Size	Acres in Analysis Area	Parcels	Description
Big Wild Horse Mesa Wilderness	18,192	2,305	SE288A, SE289, SE290, SE291A, SE292A	Designated by the U.S. Congress in 2019, this wilderness area is sparsely vegetated, allowing its geology to be easily observed. Capped and protected from erosion by the Morrison Formation, the distinctive Summerville Formation creates striking cliffs made up of thin beds of chocolate, bone, and green colored shale, siltstone, and sandstone.
Cold Wash Wilderness	11,001	1,436	SE187, SE201, SE205, SE206A–B	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell, which features magnificent badlands of brightly colored and wildly eroded sandstone formations, deep canyons, and giant plates of stone tilted upright through massive geological upheaval. This landscape reveals a geological history laid bare through millennia of upheaval and erosion. The geological history of the San Rafael Swell area began 40 to 60 million years ago when a massive uplift formed a geological anticline. This bulge in the earth's crust eventually eroded to leave high mesas, deep canyons, domes, arches, and spires. The terrain varies from the sheer cliffs and canyons to more gently carved badlands broken by shallow washes. Excavations have uncovered numerous fossils, including more than 12,000 bones of at least 70 different animals as well as a dinosaur egg, complete with embryo. Evidence of Native American cultures, including the Fremont cultural group and Paiute and Ute Tribes, is common throughout the San Rafael Swell in the form of pictograph and petroglyph panels. From ca. 1776 to the mid-1850s, the Old Spanish Trail trade route passed through (or just north of) the San Rafael Swell. The San Rafael Swell provides excellent habitat for wildlife. More than 200 sure-footed desert bighorn sheep live among the crags of this rugged landscape. Also found in the area are bald eagles and peregrine falcons, both federally listed endangered species, and other birds of prey, including golden eagles, red-tailed hawks, and prairie falcons.

Wilderness Area	Total Size	Acres in Analysis Area	Parcels	Description
Desolation Canyon Wilderness	142,996	16,602	SE112, SE115, SE116, SE118–121, SE123–134, SE135A–B, SE136–149	Designated by the U.S. Congress in 2019, the most prominent feature of the Desolation Canyon Wilderness is the 84-mile segment of the Green River through Desolation and Gray Canyons. The wilderness has an extensive system of deep canyons. The wilderness contains arches, pinnacles, and other erosional remnants not known to occur elsewhere in the Wasatch Formation in similar concentrations or settings. Parcels SE127 and SE135A are mineral estate only; the BLM already manages the surface acreage of these parcels, which are now inside of the Desolation Canyon Wilderness. As a result, these parcels would not become part of an LWC unit after the exchange because they are already within designated wilderness.
Eagle Canyon Wilderness	13,832	1,257	SE187, SE201, SE202, SE203A	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell and displays similar geological, biological, and cultural features.
Horse Valley Wilderness	12,201	2,360	SE250, SE253, SE266, SE269, SE272, SE281	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell and displays similar geological, biological, and cultural features.
Labyrinth Canyon Wilderness	54,643	4,517	SE150A, SE151–156, SE157A, SE158A, SE159, SE160A	Designated by the U.S. Congress in 2019, this wilderness area is rimmed with towering spires and colorful sandstone walls above the Green River, which carves ever deeper as it progresses southward.
Little Ocean Draw Wilderness	20,660	2,239	SE151–254, SE270	Designated by the U.S. Congress in 2019, this wilderness area is a wash that flows through Chute Canyon. This area is composed of bluffs and benches of light-colored sandstone. Upper elevations of this wilderness are flat or rolling sagebrush and juniper hills, but where water gathers and flows following infrequent but sometimes powerful rains, it has carved deep into the sandstone revealing the area's geology and creating deep and narrow canyons.
Little Wild Horse Canyon Wilderness	5,479	755	SE253, SE271	Designated by the U.S. Congress in 2019, this wilderness area contains a slot canyon within the San Rafael Swell and near Goblin Valley State Park. The main narrows of the Little Wild Horse Canyon Wilderness can be reached by trailhead. A walk in the narrows takes one through the twisting canyon, with high walls on either side, sometimes only a few feet apart. The water that shaped the canyon has left its mark on the rock, leaving beautiful shapes and textures behind.

Wilderness Area	Total Size	Acres in Analysis Area	Parcels	Description
Lower Last Chance Wilderness	19,339	2,355	SE293A–B, SE294, SE295, SE296A, SE297A	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell and displays similar geological, biological, and cultural features.
Mexican Mountain Wilderness	76,413	6,794	SE168, SE177, SE179–186, SE192, SE196, SE198–200	Designated by the U.S. Congress in 2019, this wilderness area contains brightly colored cliffs, buttes, ridges, alcoves, and pinnacles that dominate the landscape with elevations ranging from 4,700 feet in the southeast to 6,900 feet on Mexican Mountain. Approximately half the area is barren rock with pinyon-juniper woodlands, brush, and grass covering the remaining land.
Middle Wild Horse Mesa Wilderness	16,343	1,582	SE284A, SE285, SE286, SE287A, SE288A	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell and displays similar geological, biological, and cultural features.
Muddy Creek Wilderness	98,023	12,079	SE221–223, SE243–245, SE249, SE262–265, SE267, SE268, SE272–278, SE279A, SE280A, SE281, SE282, SE283A	Designated by the U.S. Congress in 2019, Muddy Creek flows east across the northern portion of the Muddy Creek Wilderness then south through the eastern portion and forms a deep canyon through the wilderness area. The south-central portion of the wilderness consists of steep mesas. The upper reaches provide dramatic views of the twisted and carved character of the area, surrounded by evidence of volcanic activity and upthrust rock structures.
Red's Canyon Wilderness	17,325	2,101	SE247–SE249	Designated by the U.S. Congress in 2019, this wilderness area is part of the San Rafael Swell and displays similar geological, biological, and cultural features.
San Rafael Reef Wilderness	60,442	6,903	SE215, SE218, SE219, SE236–242, SE258–261	Designated by the U.S. Congress in 2019, the San Rafael Reef Wilderness makes up the eastern edge of the San Rafael Swell and is an approximately north-south-trending hogback that dips steeply eastward. Considered a major geological feature in Utah, the area consists of domes, vertical fins, and canyons from 200 to 1,000 feet deep that drain eastward.
Sid's Mountain Wilderness	49,130	4,955	SE162, SE172, SE174–176, SE188–191, SE204	Designated by the U.S. Congress in 2019, this wilderness area is characterized by an intricate canyon system, which drains northward into the San Rafael River. Massive sandstone walls, winding routes, and small tributary canyons make up the eastern portion, whereas in the west, rough badlands terrain consisting of colorful eroded soils, cliffs, and mesas exist throughout.

Wilderness Area	Total Size	Acres in Analysis Area	Parcels	Description
Turtle Canyon Wilderness	29,029	2,511	SE113, SE114, SE122, SE123, SE127, SE128	Designated by the U.S. Congress in 2019, approximately one-third of the Turtle Canyon Wilderness supports pinyon-juniper woodland, and approximately one-third of the area contains Douglas fir and mountain shrub. The remaining third consists predominantly of rock outcrops. Flat areas in the southern portion are limited to canyon floors, ledges, and narrow ridge tops. South of the cliffs, alternate layers of soft and resistant rocks form a landscape of benches and slopes cut by canyons 100 to 500 feet deep.

3.17.1.1.3 Lands with Wilderness Characteristics and Natural Areas

LWC units and natural areas are resources distinct from designated wilderness and WSAs. In order for an area to qualify as having wilderness characteristics, it must possess sufficient size, apparent naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation (BLM 2021b). The size criteria are satisfied by meeting one of the following situations: 1) roadless areas with over 5,000 acres of contiguous BLM lands (state or private lands are not included in making this acreage determination), or 2) roadless areas of less than 5,000 acres of contiguous BLM lands where they are contiguous with designated wilderness, WSAs, or an area of proposed or recommended wilderness managed by the U.S. Forest Service, USFWS, or NPS.

LWC units are areas outside of WSAs determined by a BLM inventory process to possess wilderness characteristics; they are not a formal designation or land use allocation. The existence of wilderness characteristics by itself does not carry any special protections or management prescriptions. The BLM may, as part of the land use planning process, choose to manage an individual LWC unit for the protection, preservation, and maintenance of wilderness characteristics. In some BLM land use plans within Utah, LWC units managed in this manner are referred to as natural areas. However, natural areas do not represent a formal designation codified under law. Instead, they are simply a reference to a discretionary management category.

Within LWC units and natural areas, primitive recreational activities such as hiking, backpacking, camping, and fishing are permitted. Off-highway vehicle travel is also usually permitted on existing designated routes. In addition to recreation, these LWC units and natural areas have potential for hunting, geological study, and the study of historic and prehistoric cultures. Although natural areas are LWC units managed to protect, preserve, and maintain wilderness characteristics, the BLM has opted through land use planning decisions to manage other LWC units for other multiple uses without any specific protections for wilderness characteristics.

In all, 10,648 acres of LWCs are present on BLM parcels in the analysis area. Specific LWC units within the analysis area are described in Table 3.17-2.

Table 3.17-2. LWC Units Present in Analysis Area

LWC Unit	Total Size (Acres)	Acres in Analysis Area	Parcels
Behind the Rocks	4,053	24	32
Central and South Wah Wah	69,590	723	43, 44

LWC Unit	Total Size (Acres)	Acres in Analysis Area	Parcels
Desolation Canyon	172,740	2,062	29, 46, 47, 48
Indian Swale	6,703	34	21
San Rafael River	113,819	5,756	54
Turtle Canyon	4,855	2,049	46, 48

In all, 3 acres of SITLA parcels are adjacent to LWCs in the analysis area, as detailed in Table 3.17-3.

Table 3.17-3. SITLA Parcels Adjacent to LWC Units

LWC Unit	Total Size (acres)	Acres in Analysis Area	Parcels
San Rafael Reef	27,816	3	SE213A

Parcel SE213A is directly adjacent to an LWC unit. However, because this parcel is not currently in federal management, the BLM has not conducted an inventory to determine whether it contains wilderness characteristics. Should it be found to contain such characteristics, this parcel could become part of an LWC unit.

In all, 22,897 acres of SITLA parcels are directly adjacent to natural areas in the analysis area, as described in Table 3.17-4. As discussed below, however, some of this acreage overlaps new designations as part of the Dingell Act.

Table 3.17-4. SITLA Parcels Adjacent to Natural Areas

Natural Area	Total Size of Natural Area (acres)	SITLA Parcel Acres in Analysis Area	Parcels
Diamond Mountain	27,226	3,331	SE102, SE103, SE104, SE105, SE106
Wild Mountain	533	728	SE104
Wild Horse Mesa	25,711	3,230	SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B
San Rafael Reef	3,339	1,282	SE219, SE240
Hondu Country	20,104	3,957	SE227, SE246, SE247, SE248, SE249, SE266
Muddy Creek-Crack Canyon	52,836	10,369	SE246, SE249, SE250, SE251, SE252, SE253, SE254, SE257, SE262, SE266, SE267, SE269, SE270, SE271, SE272, SE281

It is important to note that most of the Diamond Mountain and Wild Mountain Natural Areas are now within the John Wesley Powell NCA, which was designated as part of the Dingell Act. Although these two areas are currently managed for the protection, preservation, and maintenance of wilderness characteristics, the BLM is currently undergoing a land use planning process to amend the Vernal RMP to implement the NCA designation, among other actions (BLM 2023b). As a result of this planning process, it is possible that the BLM could choose a different management approach for these two areas. Potential options include one or a combination of the following: 1) continuing to manage them for the protection, preservation, and maintenance of wilderness characteristics; 2) minimizing impacts to wilderness characteristics via management restrictions (e.g., terms and conditions of use or stipulations) while emphasizing other multiple uses; or 3) allowing for other multiple uses while not protecting wilderness

characteristics. Regardless of the specific approach chosen, however, the BLM would also be required to manage these areas consistent with the Dingell Act's designation of the John Wesley Powell NCA.

Similarly, the Wild Horse Mesa, San Rafael Reef, Hondu Country, and Muddy Creek-Crack Canyon Natural Areas are now entirely or mostly within wilderness areas designated as part of the Dingell Act. The portions of these four areas within designated wilderness will now be managed as wilderness as required by the Wilderness Act of 1964. The BLM currently intends to amend the Price RMP to implement the Dingell Act's wilderness designations in Emery County (BLM 2021h). Potential changes to the Price RMP may include the removal of any natural area management decisions that have been superseded by the Dingell Act; portions of natural areas outside of designated wilderness may continue to be managed for the protection, preservation, and maintenance of wilderness characteristics or instead may be managed for other multiple uses consistent with FLPMA and/or the Dingell Act.

Finally, because the SITLA parcels adjacent to natural areas are not currently in federal management, the BLM has not conducted an inventory to determine whether they have wilderness characteristics. Should they be determined through BLM inventory to possess wilderness characteristics after the land exchange, these parcels could become part of one or more LWC units. However, such parcels could not be managed for the protection, preservation, or maintenance of wilderness characteristics (i.e., managed as a natural area), should the BLM wish to do so, until the BLM conducts further land use planning.

3.17.1.1.4 National Monuments and National Conservation Areas

As required under the Omnibus Public Land Management Act of 2009, the BLM manages components of the National Conservation Lands to "conserve, protect, and restore nationally important landscapes." NCA designations protect and enhance important historic, cultural, natural, scientific, scenic, recreational, archaeological, educational, and wildlife resources.

There are no national monuments within the special management designations, LWC units, and natural areas analysis area; however, the John Wesley Powell NCA intersects SITLA parcels SE101–SE106. The 29,868-acre John Wesley Powell NCA was established in 2019 by the Dingell Act and is located in northeastern Utah, adjacent to Dinosaur National Monument. The Dingell Act enables the BLM to support the goal to conserve, protect, and enhance important historic, cultural, natural, scientific, scenic, recreational, archaeological, educational, and wildlife resources within this NCA.

Additionally, the six equalization parcels (3C–3E and 7A–7C) contain 2,031 acres within the boundaries of the Red Cliffs NCA. The Red Cliffs NCA comprises 45,600 acres of ecologically diverse landscapes located at the convergence of the Mojave Desert, Colorado Plateau, and Great Basin physiographic regions.

3.17.1.1.5 Wild and Scenic Rivers

WSRs possess outstandingly remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values. Under the Wild and Scenic Rivers Act of 1968 (16 USC 1271 et seq.), rivers are classified as wild, scenic, or recreational. Wild river segments are generally inaccessible by roads and are characterized by primitive watersheds and shorelines and unpolluted waters. Scenic river segments, although potentially accessible in places by roads, still contain shorelines or watersheds that are largely primitive and undeveloped. Recreational river

segments are typically readily accessible by roads and could have some development along shorelines. The "wild" and "scenic" designations keep rivers in a free-flowing condition by protecting them from bedrock, flow alteration, and development to within 0.25 mile of the river.

The Wild and Scenic Rivers Act mandates an administrative river corridor with boundaries that include an average of not more than 320 acres of federal lands per mile on both sides of a designated river segment. Within these parameters, the administering agency can determine what alignment of boundaries would best fit the river and its outstandingly remarkable values. Until such time as the agency determines the final alignment of the river corridor boundaries, an interim or provisional river corridor of 0.25 mile from the centerline is applied to the designated WSR segment.

The Green River wild segment designation runs for 5.3 miles through Greys Canyon from the Coal Creek intersection at the boundary of the Uintah and Ouray Indian Reservation downstream to Nefertiti Rapid. This river segment is one of the final stretches of the highly sought after multi-day Desolation Canyon wilderness river float permit from Sand Wash to the Swasey Beach boat ramp.

The Green River recreational segment designation runs for 8.5 miles from Nefertiti Rapid to the bottom of Swasey Rapid in Greys Canyon. Accessible by a maintained road, this river segment is often called the "Green River Daily" run and is very popular throughout the summer months because it can be run without a permit multiple times in 1 day and provides boaters with easy to moderate sections of rapids. Many visitors camp at the BLM's Swasey Beach Campground and shuttle boats upriver to Nefertiti Rapid to enjoy this fun, easily accessible recreation experience.

The Green River scenic segment designation runs for 49.2 miles from river mile 97 south of Green River, Utah, to the Canyonlands National Park boundary. This segment of river is used nearly year-round as one of Utah's premier multiday flatwater river trips and provides a variety of experiences, including outstanding scenery, hiking, camping, geology study, and cultural attractions.

No parcels within the land exchange directly contain WSR segment designations; however, SITLA parcels that lie within 0.5 mile of the designated segments of the Green River consist of SE144, SE145, SE149, SE150A and B, SE151–SE153, and SE155.

3.17.1.1.1 Other Designations

BLM regulations authorize the establishment of special areas where BLM determines that the resources require special management and control measures for their protection (43 CFR 2932.5). One parcel (34) is partially located within a special area, the Fivemile Pass Recreation Area, which was designated as a special area in December 2021 under the Decision Record for the Fivemile Pass Special Area Designation (DOI-BLM-UT-W010-2020-0001-EA).

Seventy SITLA parcels (SE161, SE162, SE165, SE173, SE178, SE190, SE191, SE193–SE195, SE197, SE198–SE200, SE203A, SE203B, SE204, SE205, SE206A, SE206B, SE207–SE212, SE213A, SE213B, SE214, SE215, SE216A, SE216C, SE217, SE218, SE220, SE221, SE223, SE224A, SE224B, SE225–SE235, SE237, SE238, SE246, SE251, SE254–SE258, SE260, SE262, SE264, SE266, SE269, SE274, SE277, SE278, SE281, SE285, SE286) are also fully or partially surrounded by, or are directly adjacent to, the 217,000-acre San Rafael Swell Recreation Area, which was designated as part of the Dingell Act.

Five SITLA parcels (SE107–SE111) also intersect bike trails within the McCoy Flats Trail System.

3.17.1.2 Management Framework

The FLPMA directs managers to pursue multiple-use management while protecting the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values. FLPMA is the legislative authority that established WSAs, requires the inventory of LWCs, and established ACECs.

Additional statutes, regulations, and other guidance that inform special management designations, inventory and identification of LWC units, and natural area management on BLM lands are as follows:

- Wilderness Act of 1964
- Wild and Scenic River Act of 1968
- Omnibus Public Land Management Act of 2009
- Dingell Act

Further BLM guidance is provided in 43 CFR Part 6300 and a series of manuals, including 6310 *Conducting Wilderness Characteristics Inventory on BLM Lands* (BLM 2021a), 6320 *Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process* (BLM 2021b), 6100 *National Landscape Conservation System Management Manual* (BLM 2012b), 6340 *Management of Designated Wilderness Areas* (BLM 2012a), and 6400 *Wild and Scenic Rivers – Policy and Program Direction for Identification, Evaluation, Planning, and Management* (BLM 2012d).

3.17.2 Proposed Action

Under the land exchange, a total of approximately 12,512 acres of BLM parcels within special management designations and LWC units would be conveyed to SITLA, and a total of approximately 129,175 acres of SITLA parcels[20] within or adjacent to special management designations, LWC units, and natural areas would be conveyed to the BLM. If needed for value equalization purposes, an additional approximately 2,031 acres of SITLA parcels within special management designations could be conveyed to the BLM. Tables 3.17-5 and 3.17-6 provide a breakdown of acreage by special management designation type and management category, respectively.

Table 3.17-5. BLM and SITLA Parcel Acreage by Special Management Designation Type

Special Management Designation Type	BLM Parcels Transferred to SITLA (acres)	SITLA Parcels Transferred to BLM (acres)	Equalization Parcels Transferred to BLM (acres)
ACECs	1,565	0.6	0
Wilderness	0	70,750	0
NCAs	0	3,031	2,031
WSRs	0	0	0

[20] This acreage exceeds the total acreage of SITLA parcels conveyed to the BLM because some lands fall into two different special management designation types, based on previous and new Dingell Act designations.

Special Management Designation Type	BLM Parcels Transferred to SITLA (acres)	SITLA Parcels Transferred to BLM (acres)	Equalization Parcels Transferred to BLM (acres)
Other designations	299	32,493	0
Total	1,864	106,275	2,031

Table 3.17-6. BLM and SITLA Parcel Acreage by Management Category

Management Category	BLM Parcels Transferred to SITLA (acres)	SITLA Parcels Transferred to BLM (acres)	Equalization Parcels Transferred to BLM (acres)
LWCs	10,648	3*	0
Natural areas	0	22,897*	0
Total	10,648	22,900	0

*As discussed in Section 3.17.1.1.3, the SITLA parcels are not currently part of a management category. They are adjacent to BLM LWC units or natural areas.

Overall, this exchange of lands would result in a net gain of acreage within special management designations, thus enhancing the unique values and characteristics associated with each type and resulting in a benefit to the public. Following conveyance, the BLM would manage acquired lands in a manner consistent with each special management designation. Acquired parcels located outside of special management designation boundaries would be managed consistent with the least restrictive adjacent parcel under the Price RMP or consistent with management objectives identified for adjacent lands under the Vernal RMP.

Upon being conveyed to the BLM, all non-federal parcels entirely within the boundaries of wilderness areas and NCAs would automatically become part of those special management designations by operation of law. This would result in the acquisition of 70,750 acres of additional acres within 17 individual wilderness areas and 3,031 acres within NCAs (potentially as much as 5,062 acres with equalization). These acquisitions represent inholdings within wilderness areas and NCAs that, if acquired, would greatly improve the continuity of BLM planning and management of important resources. Furthermore, acquisition would prevent future development within these inholdings. This, in turn, would obviate the need for the BLM to provide reasonable access to landowners and permittees across existing wilderness and NCA lands (which could entail the construction of new roads and other associated surface disturbances that result in resource degradation within these existing protected areas).

Acquisition of SITLA parcels SE144, SE145, SE149, SE150A and B, SE151–SE153, and SE155, which lie near WSR river segment designations, could result in some acreage within those parcels being included within the WSR river administrative corridor boundary, depending on the final disposition of those boundaries as determined by future BLM decisions. Portions of any parcels that ultimately lie within the WSR river administrative corridor would automatically be included under the prescriptive requirements of the Wild and Scenic Rivers Act and any subsequent comprehensive river management plan implemented by BLM.

Non-federal lands within or adjacent to LWC units and natural areas conveyed to the BLM would not automatically become part of an LWC unit or be managed as a natural area. Instead, these lands would first need to be inventoried and determined to possess wilderness characteristics. Should they be found to have wilderness characteristics, the BLM could include them within an existing or new LWC unit. As also discussed in Section 3.17.1.1.3, if these lands ultimately were included as part of an LWC unit, the BLM would also need to consider through

the land use planning process whether to manage such lands for the protection, preservation, and maintenance of wilderness characteristics (i.e., manage them as part of an existing or new natural area). Until this additional planning has been completed, these parcels would be managed in a manner similar to the least restrictively managed adjacent parcel, per the Price RMP, or consistent with management objectives identified for adjacent lands under the Vernal RMP. A similar process would occur for parcel SE226, which is directly adjacent to the Lucky Strike ACEC (see Section 3.17.1.1.1) and, therefore, would not automatically be managed as part of the ACEC but could ultimately be added through additional land use planning if determined to be appropriate by the BLM.

As a result of creating larger special management designations and, potentially, lands the BLM has decided to manage as natural areas, the land exchange would provide opportunities for more cohesive BLM management across contiguous lands and would increase acreage with opportunities for solitude and/or primitive recreation and other important supplemental values. The land exchange would also reduce SITLA's management burden and access limitations for parcels surrounded by conservation and recreation lands managed by the BLM.

Equalization parcels 3C–3E and 7A–7C (approximately 2,031 acres) are within the Red Cliffs NCA and would be managed as part of the National Conservation Lands and under the Red Cliffs NCA RMP, if acquired (BLM 2009). These parcels are already within the Red Cliffs Desert Reserve and protected under a habitat conservation plan. Acquisition of these lands (if needed for value equalization purposes) would not result in substantial change to their current management but could increase the BLM's ability to cohesively manage recreation, wildlife habitat, and other values.

BLM parcels conveyed to SITLA would include lands that the BLM has designated as an ACEC or included in an LWC unit. The Uranium Mining Districts – Tidwell Draw ACEC's relevant and important value is historic, based on the presence of important mining sites, as noted in Section 3.17.1. Reasonably foreseeable land actions on one BLM parcel (28) located in this ACEC that could occur after the land exchange are anticipated to be consistent with other permitted ACEC uses in the Price RMP, which include surface-disturbing activities such as oil and gas leasing, subject to major constraints, as well as mineral entry with notice or plan of operations. SITLA would also comply with Utah Code 9-8-404 for cultural resources protection; therefore, no change to the ACEC value is anticipated.

BLM parcels in seven LWC units would be conveyed to SITLA and could experience a change in future land use. Although inventoried by the BLM and found to have wilderness characteristics, the Central and South Wah Wah LWC unit (BLM parcels 43 and 44) has not been considered as part of a BLM land use planning process to determine whether to manage it for protection, preservation, or maintenance of wilderness characteristics. As a result, this unit is currently managed for other multiple uses pursuant to the applicable land use plan, the 1983 Pinyon management framework plan (MFP) (BLM 1983). As described in the Price RMP, the Desolation Canyon (BLM parcels 29, 46–48), San Rafael River (parcel 54), and Turtle Canyon (parcels 46 and 48) LWC units were found to have wilderness characteristics but were not selected to protect, preserve, or maintain those characteristics, generally because of conflicts with other important resources or resource uses identified during the land use planning process. Because none of the BLM parcels in the LWC units are managed for the protection, preservation, or maintenance of wilderness characteristics and are instead managed for other multiple uses, reasonably foreseeable future actions following the land exchange (e.g., mineral exploration,

industrial development, helium development, or underground coal mining) are expected to be similar to those that could occur should they remain in federal management, assuming that the federal coal leasing moratorium is lifted. Each of these reasonably foreseeable future land uses could adversely affect wilderness characteristics with potential exploration, development, and new surface disturbances; however, these future actions would be wholly contingent on the confirmation of commercially viable deposits within these parcels, as well as market conditions, pursuant to state laws, regulations, and policy that apply to SITLA lands.

One BLM parcel (34) is located partially within a special management designation, the Fivemile Pass Recreation Area. The area allows for recreation developments and improvements, and a potential future permit and fee system. Conveyance of this parcel to SITLA could permit future actions (e.g., hard-rock mineral exploration) that would not be consistent with surrounding land use. However, similar to the BLM parcels within LWC units that would be conveyed to SITLA, whether or not mining operations are undertaken, and the timing and extent of any such development, is contingent upon the results of any mineral evaluations and future market demands pursuant to state laws, regulations, and policy that apply to SITLA lands.

Conveyance of SITLA parcels to the BLM that are currently surrounded by, or directly adjacent to, the San Rafael Swell Recreation Area would greatly improve the continuity of BLM planning and management of this area and would increase acreage with recreation opportunities. Upon being conveyed to the BLM, all SITLA parcels entirely within the boundaries of the recreation area would automatically become part of that designation by operation of law. Parcels located adjacent to, but outside of, the recreation area legislative boundary would be managed consistent with the least restrictive adjacent parcel under the Price RMP.

Conveyance of SITLA parcels to the BLM that contain bike trails within the McCoy Flats Trail System would also improve the continuity and ease of BLM planning and management of the trail system and promote nonmotorized mountain bike recreation opportunities. Under the Dingell Act, these parcels would automatically be managed as part of the trail system by operation of law.

3.17.3 No Action

Under the No Action, the land exchange would not occur, and there would be no change to current management of special management designations, LWCs, and natural areas due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.17.4 Cumulative Impacts) could result in impacts in the special management designations, LWCs, and natural areas analysis area. Additionally, under the No Action, there would not be a net gain of lands within special management designations, nor would larger units of these designations and, potentially, lands managed by the BLM as natural areas be created. This would result in a lost opportunity for more cohesive BLM management across contiguous lands and the increased acreage to enhance the unique values and characteristics associated with each category of special management designation and management category.

The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the federal coal leasing moratorium could benefit wilderness characteristics within certain LWC units; for example, reclamation of coal mining on BLM

parcels 46–48 could help preserve and maintain wilderness characteristics of the Desolation Canyon and Turtle Canyon LWC units even though the Price RMP does not manage them for this purpose.

No acquisition of SITLA parcels within special management designations such as wilderness, NCAs, or WSR corridors may result in future development within these inholdings, including the need for the BLM to provide reasonable access to non-federal landowners and permittees across lands with sensitive resources. Providing reasonable access could entail the construction of new roads and other associated surface disturbances within these areas. The result of such reasonably foreseeable future development would likely be resource degradation within the wilderness, NCAs, or WSR administrative corridors.

No land exchange would also perpetuate SITLA's management burden and access limitations for parcels surrounded by conservation and recreation lands managed by the BLM. Regulatory requirements for permitting access across federal conservation and recreation lands could be burdensome enough to render the development of SITLA resources economically unprofitable, which would have negative impacts on private industry, local and state economic growth, and state educational beneficiaries.

3.17.4 Cumulative Impacts

Cumulative effects on special management designations, LWCs, and natural areas could occur if overlapping reasonably foreseeable actions result in changes to resource values and characteristics associated with ACECs, LWCs, NCAs, natural areas, WSRs, or other designation areas. Two UDOT road projects in Table 3.1-3 with an estimated total footprint of 945 acres are located within 1 mile of BLM parcels containing LWCs:

- US-191; passing lanes milepost (MP) 26 to 157
- US-6; substation to Interstate 70

Details on these projects are not available, but they are likely to occur within or directly adjacent to the current road disturbance footprint. Therefore, no adverse effects on LWCs are anticipated. Other reasonably foreseeable actions on BLM parcels containing LWCs include a substation (parcel 32), a non-producing oil and gas lease (parcel 54), and helium development (parcel 54). These actions, making up an estimated 5,783 acres, would likely either occur on portions of the parcels outside of the affected LWC units or would be compliant with all federal regulations and BLM guidance that are applicable for protection of resources in this area, even though the Price RMP does not specifically manage these lands for the protection, preservation, or maintenance of wilderness characteristics.

SITLA parcels are not currently under BLM management; therefore, reasonably foreseeable future actions on these parcels, such as the Goblin Valley Distribution and Telecommunication Lines project in parcels SE289, SE290, SE291A–B, and SE292A–B, would have no effect on special management designations, LWCs, and natural areas.

The proposed equestrian trailhead at Fivemile Pass Recreation Area would beneficially contribute to recreation opportunities in this special area. Similarly, the proposed day use area for John Wesley Powell NCA, which would enhance visitor experiences, is also consistent with the NCA's goal of conserve, protect, and enhance important recreational resources.

Reasonably foreseeable land actions that could occur after the land exchange, described in Table 3.1-1, would generally result in a net gain within special management designations, thus enhancing the unique values and characteristics associated with each category, resulting in a benefit to the public. Additionally, some non-federal lands could be inventoried and found to have wilderness characteristics and be included as part of existing or new LWC units after the land exchange. Similarly, as part of the land use planning process, the BLM could decide to manage such lands for protection, preservation, or maintenance of wilderness characteristics (i.e., manage them as part of existing or new natural areas) in the future. Conveyance of nine BLM parcels (10,648 acres) containing LWCs to SITLA is not expected to permit or facilitate reasonably foreseeable future actions that otherwise would not in be allowed in the LWCs because these areas are not managed for the protection, preservation, or maintenance of wilderness characteristics; nevertheless, these future actions would be wholly contingent on the commercial viability and market conditions, pursuant to state laws, regulations, and policy that apply to SITLA lands.

For context, the combined disturbance associated with reasonably foreseeable future land actions and other development on BLM parcels after the land exchange would impact no more than 4% of the total acreage of the six affected LWC units (Behind the Rocks, Central and South Wah Wah, Desolation Canyon, Indian Swale, San Rafael River, and Turtle Canyon).

Therefore, no appreciable cumulative effects on special management designations, LWCs, and natural areas are anticipated to result from the land exchange when considered in combination with other present and reasonably foreseeable trends and actions.

3.18 Vegetation

Vegetation provides a wide range of ecosystem functions and human and animal uses, including soil stabilization, carbon storage, food sources, and habitat. For this EA, vegetation has been grouped into four categories: 1) non-designated, general vegetation; 2) federally threatened, endangered, and candidate species; 3) sensitive species, including state sensitive and BLM sensitive species; and 4) invasive and noxious weeds.

3.18.1 Affected Environment

3.18.1.1 Parcel-Specific Conditions

3.18.1.1.1 General Vegetation

Vegetation varies greatly across the *vegetation analysis area* and falls under five Level III Ecoregions, as determined by the EPA: 1) Central Basin and Range, 2) Colorado Plateaus, 3) Mojave Basin and Range, 4), Wasatch and Uinta Mountains, and 4) Wyoming Basin. Each ecoregion has its own set of unique characteristics, including soils, water, climate, vegetation, geology, and land use. Although there are 75 different types of vegetation communities within the vegetation analysis area, most communities are characterized by woody vegetation, including sagebrush, pinyon pine, juniper, and saltbush species. A detailed breakdown of LANDFIRE vegetation communities found within BLM, SITLA, and equalization parcels is provided in Appendix D.

3.18.1.1.2 Threatened, Endangered, and Candidate Species

There are nine threatened, endangered, and candidate plant species that have the potential to occur within the vegetation analysis area (USFWS 2022a). Table 3.18-1 lists the nine plant

species and their associated habitat descriptions. A list of threatened, endangered, and candidate species present within each parcel can be found in Appendix E.

Table 3.18-1. Federally Listed Plant Species within the Vegetation Analysis Area

Common Name	Scientific Name	Status	Habitat Description
Barneby reed-mustard	*Schoenocrambe barnebyi*	Endangered	Coarse soils derived from cobble and gravel river terrace deposits, or rocky surfaces at 4,800 to 6,500 feet in elevation.
Jones cycladenia	*Cycladenia humilis var. jonesii*	Threatened	Desert Shrub communities on barren gypsiferous clay hills that form the steep sides and lower slopes of mesas in the canyonlands section of the Colorado Plateau.
Last chance townsendia	*Townsendia aprica*	Threatened	Generally occur with galleta and salt desert shrubs in small barren openings of pinyon-juniper vegetative communities.
Navajo sedge	*Carex specuicola*	Threatened	Occurs in hanging gardens within the Great Basin Conifer Woodland. The seep-spring pockets along the Navajo Sandstone bedrock provide this habitat.
San Rafael cactus	*Pediocactus despainii*	Endangered	Desert pavements of cobble or pebble in pinyon-juniper woodlands at elevations of 4,900–5,900 feet. Hills, benches, and flats in open, semi-arid grassland with scattered junipers and pinyon pines.
Siler pincushion cactus	*Pediocactus sileri*	Threatened	Soils derived from the Moenkopi Formation, which are high in gypsum and soluble salts. In these soils, the species is found in a variety of plant communities from low elevation (approximately 2,790 feet) Mohave Desert scrub up to conifer woodlands and grasslands at 5,413 feet of elevation.
Ute ladies'-tresses	*Spiranthes diluvialis*	Threatened	Moist meadows associated with perennial stream terraces, floodplains, and oxbows. Seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, irrigation canals, and lakeshores.
Winkler cactus	*Pediocactus winkleri*	Threatened	Alkaline silty-loam or clay-loam, fine-textured soils in desert pavements of cobble, pebble, or fossil oyster shell and gypsum soils, primarily derived from the Dakota Formation, on the tops and sides of rocky hills, benches, and gentle slopes, most abundantly on sites with a southern exposure. Associated with salt desert shrub communities, characterized by drought-tolerant shrubs and grasses with ephemeral forbs at 4,760–6,890 feet of elevation.
Wright fishhook cactus	*Sclerocactus wrightiae*	Endangered	Grows among grasses in clay soils of low hills in grassland and woodland at 4,900–7,800 feet of elevation.

3.18.1.1.3 Other Special-Status Species

Other special-status species that occur in the vegetation analysis area include BLM sensitive species and the Utah Species of Greatest Conservation Need (SGCN). There are 105 plants listed on the Utah BLM sensitive plant species list (BLM 2018a), and a subset of those species have the potential to occur within the vegetation analysis area (Table 3.18-2). In addition, there are 31 plants listed on the Utah Species of Greatest Conservation Need list (UDWR 2022) that could also be present on BLM or SITLA parcels. Twenty-four of these SGCN are also federally listed

as threatened or endangered. Table 3.18-2 shows BLM sensitive species with potential to be present based on GIS data, soils data and nearby occurrence records.

Table 3.18-2. BLM Sensitive Species with Potential to be Present in the Vegetation Analysis Area

BLM Sensitive Species	Parcels with Potentially Suitable Habitat*
Creutzfeldt-flower (*Cryptantha creutzfeldtii*)	23–27
Isely's milkvetch (*Astragalus iselyi*)	32
Psorlea globemallow (*Sphaeralcea psoraloides*)	28–30, 54, SE184, SE244–SE246, SE262–SE265, SE268–SE269, SE271–SE273, SE276–SE278, SE279A, SE280A, SE281, SE282, SE283A, SE284A, SE285, SE286, SE287A, SE288A, SE293A, SE294, SE295, SE296A
Avon milkvetch (*Astragalus praelongus* var. *Avonensis*), Frisco buckwheat (*Eriogonum soredium*), Ostler's ivesia (*Ivesia shockleyi* var. *Ostleri*), pink-egg milkvetch (*Astragalus oophorus* var. *lonchocalyx*), Frisco clover (*Trifolium friscanum*), Ostlers pepperplant (*Lepidium ostleri*)	42
Horsecanyon stickleaf (*Mentzelia multicaulis* var. *librae*)	46–48, SE131, SE132, SE141
Utah spurge (*Euphorbia nephradenia*)	54
Goodrich's beardtongue (*Penstemon goodrichii*), Large yellow evening primrose (*Oenothera acutissima*), Huber's pepperplant (*Lepidium huberi*), Ackerman's green gentian (*Frasera ackermaniae*), Goodrich's stickweed (*Cleomella hillmanii* var. *goodrichii*), park rockcress (*Boechera vivariensis*), and Hamilton's milkvetch (*Astragalus hamiltonii*)	53, SE102–SE107, SE111
Rock hymenoxys (*Hymenoxys lapidicola*)	SE104
Horseshoe milkvetch (*Astragalus equisolensis*) and sterile yucca (*Yucca sterilis*)	53, SE107, SE111
Jones indigo bush (*Psorothamnus polydenius* var. *jonesii*)	28–30, SE180–SE183, SE185–SE186
Thomson's talinum (*Phemeranthus thompsonii*)	SE161
Maguire's daisy (*Erigeron maguirei*)	SE165, SE167, SE187, SE190–SE191, SE195–SE197, SE199, SE201–SE202, SE203A and B, SE204, SE205, SE206A, SE212, SE213A, SE222, SE223, SE224A, SE225, SE226, SE243, SE280A, SE283A
Mussentuchit gilia (*Aliciella tenuis*)	SE172, SE202, SE203A and B, SE204, SE206A, SE244, SE245, SE246, SE262, SE263, SE264, SE265, SE268, SE269, SE271, SE272, SE277, SE278, SE279A, SE281, SE282, SE293A, SE294, SE295, SE296A
Flat-top buckwheat (*Eriogonum corymbosum smithii*)	54, SE276, SE289, SE290, SE291A, SE292A
Trotter's oreoxis (*Oreoxis trotteri*)	54, SE269, SE273, SE274, SE275, SE276, SE285, SE286
Entrada rushpink (*Lygodesmia grandiflora entrada*)	54, SE298–SE290, SE292A

* Excludes parcels only conveying subsurface mineral rights.

3.18.1.1.4 Invasive and Noxious Weeds

Invasive and noxious weeds are unwanted plant species that can be injurious to public health, agriculture, recreation, wildlife and property. Legally, a noxious weed is any plant designated as such by a federal, state or county government. “Invasive weeds” is a general term for all plants that establish, persist, and spread widely in natural ecosystems outside the plant’s native range. Invasive weeds include all noxious weeds and other plants that are considered harmful but are not necessarily listed by governments. Because controlling invasive and noxious weeds can be quite costly, federal and local governments are required to take action in preventing invasions and controlling further spread.

Invasive and noxious weeds have potential to be present on both BLM and SITLA parcels within the vegetation analysis area. Common noxious weed species include houndstongue (*Cynoglossum officinale)*, musk thistle (*Carduus nutans*), saltcedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), bindweed (*Convolvulus* spp.), and white top (*Cardaria* spp.). Common invasive species include cheatgrass (*Bromus tectorum*), saltlover (*Halogeton glomeratus*), and prickly Russian thistle (*Kali tragus*). Specific invasive and noxious weeds identified by BLM FOs that are known to be present on BLM parcels where future land uses could change are listed in Table 3.18-3.

Table 3.18-3. Invasive and Noxious Weeds Found within BLM Parcels

Parcels	Invasive or Noxious Weeds Present
9–13, 42–44	Approximately 0.55 acre of houndstongue (*Cynoglossum officianale*) is known to exist in the Wah Wah area. Other known weeds are scotch thistle (*Onopordum acanthium*), white top (*Cardaria* spp.), black henbane (*Hyoscyamus niger*), and musk thistle (*Carduus nutans*).
23–26	Invasives: halogeton (*Halogeton glomeratus*), prickly Russian thistle (*Salsola tragus*) and cheatgrass (*Bromus tectorum*). Noxious weeds: nodding plumeless thistle (*Carduus acanthoide*s), white top, bindweed (*Convolvulus* spp.), saltcedar (*Tamarix ramosissima*), and Russian olive (*Elaeagnus angustifolia*).
27, 49	Same noxious weeds as parcels 23–26.
28–30, 50, 54	Same invasive weeds as parcels 23–26. Noxious weeds: bindweed, saltcedar, and Russian olive.
46–48	Noxious weeds: bindweed, saltcedar, and Russian knapweed (*Acroptilon repens*).
53	Noxious weeds: saltcedar, Fuller’s teasel (*Dipsacus fullonum*), Canada thistle (*Cirsium arvense*), and Russian olive.

3.18.1.2 Management Framework

3.18.1.2.1 General Vegetation

The BLM is required to manage federal land for multiple uses as directed by the Multiple-Use Sustained-Yield Act of 1960. In addition to managing vegetation on federal land by vegetation type and local ecological conditions, BLM FOs also manage vegetation following principles outlined in the BLM Handbook H1740-2 *Integrated Vegetation Management* (2008a) and the Utah Rangeland Health Standards and Guidelines (BLM 1997). Vegetation management related to fuels and fire management is described in Section 3.8. Those principles instruct for the management of diverse, healthy, and resilient native plant communities at a landscape scale. Therefore, the goal is to manage for a mix of plant communities comprised primarily of native

species across the landscape. This management is carried out on the local level and in accordance with land health standards that are developed with an interdisciplinary approach to support other renewable resource programs.

Similarly, the State of Utah supports the wise use, conservation, and protection of its natural resources because it is important to the state economy that land is properly managed for fish, wildlife, livestock production, timber harvest, recreation, energy production, mineral extraction, water resources, and the preservation of natural, scenic, scientific, and historical values. The state of Utah manages natural resources according to the State of Utah RMP. This plan outlines goals and objectives for multiple vegetative resources, including wildlife habitat, forestry, riparian areas, and wetlands.

3.18.1.2.2 Threatened, Endangered, and Candidate Species

Under the ESA, federal agencies are required to implement conservation programs to recover federally listed threatened, endangered, and candidate plant species and ensure activities are carried out without contributing to further harm of the species.

The BLM's Threatened and Endangered Species Program manages all threatened and endangered species on public lands according to BLM Manual 6840 *Special Status Species Management* (2008b). The program's objective is to conserve or recover federally listed species and the ecosystems on which they depend so that protections are no longer needed. BLM is required by law to protect ESA plant species under the ESA.

SITLA is not required by law to protect ESA plant species under the ESA or obligated to apply protective management of threatened, endangered, and candidate plant species on state trust lands. While the UDWR does not have regulatory authority over federally listed plants, they, and other applicable state agencies, could suggest voluntary conservation measures, including mitigation, with respect to projects and development actions on lands managed by SITLA. In addition, all federally listed species were added to the Utah SWAP SGCN list in the 2022 SWAP minor amendment (see section below).

3.18.1.2.3 Other Special-Status Species

Similar to threatened, endangered, and candidate plant species, the BLM's Threatened and Endangered Species Program manages all BLM sensitive species on public lands according to BLM Manual 6840 *Special Status Species Management* (2008b). The program's objective for sensitive species is to initiate proactive conservation measures that reduce or eliminate the need for listing of these species under the ESA.

SITLA has no obligation to provide protective measures for these BLM sensitive plant species; however, the Utah SWAP identifies five plant species on the Utah SGCN list that are also on the BLM sensitive list, and implements management strategies to prevent the need for additional listings under the ESA.[21] The BLM has no obligation to follow management strategies for the sole SGCN species that is listed only on the SWAP SGCN list because the species only exists on private and U.S. Forest Service–managed lands.

[21] Goose Creek milkvetch (*Astragalus anserinus*) is only located in Box Elder County and does not have potential to be present on land exchange parcels.

3.18.1.2.4 Invasive and Noxious Weeds

BLM FOs manage invasive and noxious weeds following the priorities outlined in the Manual Section 9015 – Integrated Weed Management (BLM 1992). These priorities instruct the BLM to develop weed management plans, ensure the use of weed-free materials, conduct weed assessments and coordinate their management with other agencies. The partnerships formed between federal, state, and local agencies and private landowners are essential for successfully controlling weeds at the landscape level. The BLM also participates in Utah's Cooperative Weed Management Areas to set common goals and pool resources to effectively manage noxious weeds across the state.

In accordance with the Utah Noxious Weed Control Act of 1971, the State of Utah is required to designate noxious weeds and oversee county noxious weed control programs that are designed to prevent and control noxious weeds. Pursuant to Utah Code Annotated 53C-5-104, SITLA collects a fee annually, currently $0.10 per AUM, from each grazing permittee for the control of noxious weeds, new and invading plant species, insects, and disease infestation on trust lands and uses that funding to assist with the management of noxious weeds on SITLA lands. There are currently 54 weeds on the State of Utah Noxious Weed List and nine additional species listed by the counties of the analysis area. Although counties are required to manage for all state-listed noxious weed, each county has different priorities and, therefore, could prioritize control of listed weeds as they see fit. Regardless, state and county governments participate in the Cooperative Weed Management Areas to help guide weed management across the state.

3.18.2 Proposed Action

3.18.2.1 General Vegetation

Table 3.18-4 summarizes acreage of mapped vegetation present on parcels with surface estate that would be conveyed to SITLA or the BLM under the land exchange (see Appendix D for details).

Table 3.18-4. Mapped Vegetation Conveyed within the Land Exchange

Parcel Type	Mapped Vegetation (acres)
BLM parcels	84,134
SITLA parcels	114,527
Equalization parcels	2,030

Note: Excludes parcels only conveying subsurface mineral rights or mapped as developed, open water, or quarries. Equalization parcels would only be conveyed if needed for value equalization purposes.

Of this total, potential changes in future land uses on 38 BLM parcels (66,189 total acres of mapped vegetation) conveyed to SITLA could alter existing vegetation distribution or composition (Table 3.18-5). Any reasonably foreseeable residential, energy, mining, recreational, water storage, or industrial development that occurs on these parcels after land conveyance could result in vegetation disturbance, degradation, or complete removal, as well as indirect effects on plant productivity associated with soil compaction, erosion, accidental spills, or fugitive dust. The degree of these impacts would depend on the type and amount of vegetation affected and the rate at which vegetation could regenerate postconstruction. However, these actions are not anticipated to result in measurable changes to overall abundance or distribution of vegetation communities, based on a comparison of land exchange–related impacts relative to overall vegetation availability across the state of Utah (see Section 3.23, Table 3.23-3 for a

comparison by specific vegetation types). The State of Utah RMP outlines goals and objectives for multiple vegetative resources and could help reduce site-specific vegetation impacts. SITLA works cooperatively to implement these goals and objectives on SITLA lands as may be in the best interest of their trust beneficiaries.

For all other BLM parcels, reasonably foreseeable future land uses are anticipated to continue to consist of ROWs, livestock grazing, commercial guided hunting, and dispersed recreation activities (see Table 3.1-1). Any temporary, localized vegetation impacts associated with these actions would occur regardless of the land exchange because these actions already occur on the landscape.

Table 3.18-5. Reasonably Foreseeable Future Land Use and Acreage by BLM Parcel

Parcels*	Reasonably Foreseeable Future Land Use	Mapped Vegetation (acres)*
6, 15	Residential development	233
8–13, 23–25, 33	Solar energy development	6,553
17, 26	Recreational development	1,161
27	Future reservoir site	121
28–30	Industrial development	5,737
34–44, 54, including 38S, 39S	Mineral exploration	44,392
46–50	Underground coal mining operations	6,175
53	Lease potential for oil and gas	1,580

* Excludes parcels only conveying subsurface mineral rights or mapped as developed, open water, or quarries.

SITLA parcels (SE101–SE297B) with mapped vegetation and any equalization parcels (3C–3E and 7A–7C) with mapped vegetation (if needed for value equalization purposes) would be managed under the appropriate RMP or MFP. Vegetation communities are expected to generally remain stable on parcels where they previously occurred under SITLA management, because lands conveyed to the BLM would be managed for natural and cultural resources protection, as well as recreation use or other existing encumbrances as established in the Dingell Act. The BLM could choose to implement vegetation management actions to move vegetation to a more desired state, if desired, which could change the composition of vegetation in these parcels over time. Additionally, both BLM and SITLA would manage vegetation similarly to promote the conservation of native vegetation communities.

3.18.2.2 Threatened, Endangered, and Candidate Species

Listed and candidate plant species whose range overlaps BLM parcels are provided in Table 3.18-6. As noted in the table notes, this acreage likely overestimates the extent of potential impact because individuals may not be present on all lands that fall within a species' range.

Table 3.18-6. Listed and Candidate Plant Species for BLM Parcels with Reasonably Foreseeable Future Land Use

Species	Acreage within Species' Current Range	Parcels*
Jones cycladenia	8,077	28^{+}, 30^{+}, 32, 46, 47, 48
Last chance townsendia	3,190	26, 27, 49^, 50^
Navajo sedge	855	32

Species	Acreage within Species' Current Range	Parcels*
San Rafael cactus	15,776	23-25+,26*+, 27-30+, 49, 50, 54
Ute ladies'-tresses	15,548	9–13+, 23–26+, 35–40+, 42+, 43+, 46–48+, 53+^, 38S+, 39S+
Wright fishhook cactus	634	50+

Note: N/A = not present on BLM parcels. Table excludes parcels only conveying subsurface mineral. Acreage likely overestimates extent of potential impact, because suitable habitat may not be present on all lands that fall within a species' range.

* Denotes parcel with documented occurrence.

^ Denotes parcel where a mapped Element Occurrence intersects but all recorded plant locations are outside of the parcel

+ Denotes parcel with expected change in land use

Future general land use effects would be as described for general vegetation in Section 3.18.3.1. However, because of their small population sizes and often specialized habitat needs or dependence on rare habitats, listed and candidate species may be more vulnerable to habitat fragmentation, alteration, or degradation as well as human disturbance, mortality of individuals, and loss of genetic diversity. Specific impacts associated with development would depend on the locations of projects relative to species populations, but a general discussion of potential impacts associated with specific types of reasonably foreseeable actions is provided in Table 3.18-7.

Table 3.18-7. Reasonably Foreseeable Future Land Uses and Impacts by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Species	Impacts
8–13, 23–25	Solar energy development	Ute ladies'-tresses	Habitat loss and modification, competition from exotic weeds, hydrology change (modification of wetland habitats), and reduction in the number and diversity of insect pollinators all represent key threats to this species (USFWS 2023). Utility-scale solar energy development could result in habitat destruction or modification, if suitable habitat is present where ground-disturbing activities occur. Indirect impacts could also result from surface water and sediment runoff from disturbed areas, fugitive dust generated by project activities, introduction and spread of invasive and non-native species, or accidental spills.
17, 26	Recreational development	San Rafael cactus, Ute ladies'-tresses	Possible impacts to these species due to project construction and operations include trampling of individual plants and disturbance to seeds. The San Rafael cactus is particularly vulnerable during the spring flowering period when at or above ground, and seasonally moist soils make them susceptible to damage and mortality from surface disturbance (USFWS 2011). Recreational uses within riparian areas could also cause compaction, result in changes in hydrology, and encourage proliferation of weedy species that could adversely affect Ute ladies'-tresses habitat, if present.
28–30	Industrial development	Jones cycladenia, San Rafael cactus	See recreational development, above, for impacts to the San Rafael cactus. Without specific project details, potential impacts to Jones cycladenia would most likely include potential loss of individual plants and of established seedbank in areas of surface disturbance (USFWS 2021c). Plants located near development activities could also be impacted by dust, weed encroachment, and spills. Fragmented plant populations could result in lower pollinator visitation and pollinator rates and could reduce potential future expansion and recovery of the species.
34–44, 54, 38S, 39S	Mineral exploration and production	Ute ladies'-tresses	As noted above, this species is threatened primarily by habitat loss and modification. Mineral and other energy development could result in the loss of suitable habitat and destruction of individual plants, if present, due to changes to water quality and quantity, soil erosion, streambank degradation from sedimentation, spills (gas, oil, lubricants, drilling fluids), elevated levels of salinity, accumulation of fugitive dust, stormwater runoff, and hydrological flow changes.

Parcels	Reasonably Foreseeable Future Land Use	Species	Impacts
46–50	Coal mining operations	Last chance townsendia, San Rafael cactus, Ute ladies'-tresses, Wright fishhook cactus	See oil and gas impacts, below, for the San Rafael cactus. See mineral exploration and production impacts, above, for the Ute ladies'-tresses. Mining activities could affect Wright fishhook cactus by removing habitat, increasing erosion potential and dust deposition, fragmenting habitat through access road or other infrastructure construction, and increasing invasive plant species (USFWS 2016b). The final rule listing last chance townsendia (USFWS 1985) states "Coal mining development and production, especially strip mining along the exposed coal seams in the Emery coalfield, has [*sic*] the potential of impacting and possibly eradicating 95 percent of the total population" (USFWS 1993). Primary potential coal mining impacts consist of habitat disturbance and removal of upper soil layers.
53–54	Lease potential for oil and gas or helium	San Rafael cactus, Ute ladies'-tresses	New road construction, utility corridors, pipelines, well pads, and infrastructure could adversely affect the Ute ladies'-tresses orchid via increased collection or trampling, fugitive dust accumulation, habitat fragmentation, habitat loss, spread of noxious and non-native plants, and herbicide drift. See also mineral exploration and production impacts, above, for the Ute ladies'-tresses. Mining activities, including oil and gas exploration and development, could impact the San Rafael cactus by destroying habitat, increasing erosion potential and dust deposition, fragmenting habitat through access road or other infrastructure construction, and increasing invasive plant species. Potential impacts to individual cacti include crushing and removing plants, reducing plant vigor, and reducing reproductive potential; these impacts would reduce seedbank quantity and quality and decrease pollinator availability and habitat (USFWS 2011, 2016a).

Potential impacts to any current or future threatened, endangered, and candidate plant species, as discussed above, could occur on BLM parcels, if present, because SITLA is not obligated to apply protective management of threatened, endangered, and candidate plant species on state trust lands; however, the UDWR and other applicable state agencies could suggest voluntary conservation measures, including mitigation, with respect to future projects and development actions on lands managed by SITLA.

SITLA is required to manage its assets in the most prudent and profitable manner for the exclusive benefit of the trust beneficiaries. Therefore, this directive would take precedence over management for a listed plant species when they are in conflict. Additionally, future changes in economic forces have the potential to change the management direction and future land uses of parcels to be conveyed to from BLM to SITLA. Therefore, without the protections afforded to the species under Section 7(a)(2) of the ESA and without the prohibition of "incidental take," it must be assumed that at some point all areas containing suitable habitat for a listed plant species would be managed in a way incompatible with the species.

Given this assumption, the potential future loss of unsurveyed, suitable habitat *May Affect, Is Likely to Adversely Affect* Jones cycladenia, Last Chance townsendia, San Rafael cactus, Ute-ladies'-tresses, and Wright's fishhook cactus. Although, these same assumptions apply to Navajo sedge, the lack of known springs and the lack of areas that could be identified as potentially being springs from remote sensing further reduces the potential that suitable habitat for Navajo sedge is being conveyed out of federal management. Therefore, the conveyance of potential habitat for Navajo sedge from BLM to SITLA *May Affect, But Is Not Likely to Adversely Affect* the species.

Future land uses on all SITLA and equalization parcels (if needed for value equalization purposes) would be managed for natural and cultural resources protection and be available for recreation use or continuation of existing encumbrances as established in the Dingell Act. Additionally, conveyance of SITLA and equalization parcels could provide a benefit due to the net gain of potential habitat by the BLM. As such, the land exchange *may affect, but is not likely to adversely affect* plant species with potential to occur on SITLA and equalization parcels.

3.18.2.3 Other Special-Status Species

Potential general land exchange impacts to sensitive plant species present on BLM parcels would be as described for non-designated species in Section 3.18.3.1 and could include reductions in the occurrence, acreage, or quality of habitat depending on the nature, type, and location of future developments. SITLA is not obligated to apply protective measures for these species on state trust lands; however, because the sensitive species present in the vegetation analysis area have a wider distribution than just the affected BLM parcels, any impact to the species from parcel conveyance to SITLA and future land uses would be limited. Although no specific uses are currently contemplated for parcel 32, any future actions would occur in compliance with the 2022 conservation agreement signed between the BLM, USFWS, and SITLA for continued protection of Isely's milkvetch (*Astragalus iselyi*) habitat.

Likewise, conveyance of SITLA and equalization parcels (if needed for value equalization purposes) to the BLM could provide a benefit by creating a more contiguous ecosystem for management and increased management oversight for sensitive species, as established in BLM RMPs and other relevant guidance. Therefore, reasonably foreseeable actions on SITLA or

equalization parcels after conveyance (see Table 3.1-2) would not adversely affect sensitive plant species.

3.18.2.4 Invasive and Noxious Weeds

Potential future residential, energy, recreational, water storage, or industrial development on BLM parcels, per Table 3.18-3, could result in the disturbance of the soil surface and the temporary removal of previously established vegetation, which could increase the risk of invasive species and noxious weeds introduction or spread; however, in accordance with the Utah Noxious Weed Control Act of 1971, the State of Utah is required to designate noxious weeds and oversee county noxious weed control programs that are designed to prevent and control noxious weeds. Conversely, development that removes and replaces all vegetation with other non-permeable material (e.g., pavement, buildings) could result in eradication of weeds in site-specific locations.

SITLA parcels (SE101–SE297B) and equalization parcels (3C–3E and 7A–7C) (if needed for value equalization purposes) with invasive species to be transferred to the BLM would be managed under the appropriate RMP or MFP. Invasives species risk is expected to remain approximately the same on parcels where they previously occurred under SITLA management, because both BLM and SITLA manage weeds similarly and participate in Utah's Cooperative Weed Management Areas to effectively manage weeds across the state.

3.18.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to general vegetation, threatened, endangered, and candidate plant species, other special-status species and invasive and noxious weeds due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.18.4 Cumulative Impacts) could result in impacts in the vegetation analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit vegetation resources in the short term because reclamation of BLM parcels 46–50 and 46C would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. However, future land uses after reclamation is complete could reintroduce a risk to individual plants or plant communities if these activities increase human activity or result in vegetation alteration, soil disturbance, introduction or spread of invasive and noxious plants, or changes to water quality or quantity.

3.18.4 Cumulative Impacts

Based on estimated reasonably foreseeable residential development; hydrogen, geothermal, oil and gas, solar, and helium generation; and pipeline, transmission/substation, telecommunication, recreation, and road construction project footprints listed in Table 3.1-3, up to an estimated 232,405 acres of landscape disturbance for projects (excluding actions already in operation or in effect) could have a temporary to long-term adverse impact to individual plants or plant communities due to changes in human activity, vegetation alteration, soil disturbance, introduction or spread of invasive and noxious plants, and water quality or quantity. Listed, proposed, and candidate plant species with suitable habitat (if present) impacted by these projects

could be more vulnerable to habitat fragmentation, alteration, or degradation; human disturbance; mortality of individuals; and loss of genetic diversity. Of this total, however, only an estimated 13,480 acres (6%) of future disturbance would directly overlap or intersect land exchange parcels. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Ranges of the following listed species would overlap the above reasonably foreseeable projects: Barneby reed-mustard (36,761 acres), Jones cycladenia (24,343 acres), last chance townsendia (1,962 acres), Navajo sedge (1,634 acres), San Rafael cactus (81,768 acres), Siler pincushion cactus (893 acres), Ute ladies'-tresses (30,244 acres), and Wright fishhook cactus (88,631 acres). However, not all these acreages would directly overlap or intersect reasonably foreseeable project footprints, and these acreages likely overestimate the extent of potential impact because suitable habitat may not be present on all lands that fall within these ranges.

As discussed in Section 3.18.3, reasonably foreseeable land actions that could occur after the land exchange could generate up to an additional 66,189 acres of vegetation disturbance, degradation, or complete removal, as well as indirectly affect plant productivity or increase the introduction or spread of invasive species in parcels 6, 8–13, 15, 17, 23–30, 33–44, 46 –50, 53, 54, 38S, and 39S. Future actions could also affect up to 49 to 15,767 acres of land within the range of specific listed, proposed, and candidate plant species, although suitable habitat may not be present on all lands. Overall abundance or distribution of vegetation communities would not measurably change, based on a comparison of reasonably foreseeable land action impacts that could occur after the land exchange relative to overall vegetation availability across the state of Utah (see Table 3.23-3). For context, the combined disturbance associated with land exchange future actions and other reasonably foreseeable development would impact less than 1% of mapped vegetation (97,095,756 acres) in the five Level III Ecoregions that overlap the vegetation analysis area.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. SITLA and BLM compliance with the Utah Noxious Weed Control Act, the State of Utah RMP, and other relevant guidance would further reduce potential impacts. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur, and any change in regulatory protection would not adversely affect listed species recovery or affect their listing status.

3.19 Visual Resources

As directed by the FLPMA, the BLM is required to consider scenic values of public land as a resource that merits management and preservation, where appropriate, determined through the land use planning process. Visual resources on BLM-administered land are managed in context with the Visual Resource Management (VRM) system, as described in the BLM Manual 8400 Series – Visual Resource Management (BLM 1984).

This analysis describes and evaluates land exchange impacts to visual resources within 3 miles of the parcels proposed to be exchanged, hereafter referred to as the *visual resources analysis area*. This spatial scale was established because it corresponds to a threshold between the BLM's VRM foreground/middleground (F/M) distance zone (0–3 miles) (BLM 1986a) where proposed management activities could be seen in detail. Effects from farther away [background distance

zone (3–15 miles)] were considered on a site-specific manner if warranted due to the scale of the proposed management activity.

3.19.1 Affected Environment

The BLM VRM system includes an inventory of scenic values [BLM Manual 8410-1 *Visual Resource Inventory* (1986a)] based on the following factors: 1) diversity of landscape features that define and characterize landscapes in a given planning area (scenic quality), 2) public concern for the landscapes that make up a planning area (sensitivity levels), and 3) landscape visibility from public viewing locations (distance zones). These factors are collectively described as the visual resource inventory (VRI) and are referred to as the VRI for BLM-administered land. Although the BLM only has jurisdiction over the specific land they manage, VRI data are often collected for most, if not all land within a given BLM FO, district office, or planning area. Combined, the three VRI factors determine VRI Classes on BLM-administered land. VRI Classes indicate the overall existing scenic values of BLM-administered land. The VRI Classes and individual factors provide baseline visual resources data that are then used, in combination with other resource needs, to determine VRM Classes for all BLM-administered lands. For more detail regarding BLM VRM Classes, refer to Section 3.19.1.2.

Based on the typical issues identified for visual resources, the affected environment for visual resources focuses on three components: 1) scenery, including the BLM VRI; 2) viewing locations; and 3) conformance with BLM VRM Classes.

3.19.1.1 Parcel-Specific Conditions

3.19.1.1.1 Scenery

Most of the parcels proposed to be exchanged are located within the Uinta Basin, Canyonlands, or High Plateaus of Utah sections of the larger Colorado Plateau physiographic province (Fenneman 1931). The Uinta Basin section is largely characterized by plateaus and broad basins. The plateaus are deeply dissected and display numerous sedimentary layers, sharp ravines, and sparsely vegetated escarpments and cliffs and are best represented by the Book Cliffs, Tavaputs Plateau, and Roan Cliffs. The Canyonlands section is largely defined by the tributary rivers and streams of the Colorado and Green Rivers that have created numerous formations of visual interest, including plateaus, mesas, buttes, and canyons. Within the San Rafael Swell, the landscape is characterized by canyons and escarpments that display sedimentary depositions of various colors. The High Plateaus of Utah section is characterized by several plateaus (e.g., Wasatch Plateau) separated by prominent north-south-trending valleys, including the Sevier and San Pitch River valleys. Several of the plateaus are capped by lava flow that has inhibited erosion, whereas others have been eroded into rounded hills.

Additionally, some parcels are located within the Great Basin section of the larger Basin and Range physiographic province or within the Middle Rocky Mountains physiographic province. The Great Basin physiographic section is characterized by isolated, parallel, north-south-oriented mountain ranges, typically 50 to 75 miles long, that are surrounded by nearly level, typically undrained basins. Gently sloping alluvial fans often occur at the interface between the mountains and basins, which are commonly braided by intermittently flowing shallow drainages. These landscapes are heavily influenced by the arid climate resulting in distinct and predictable vegetation patterns. The Middle Rocky Mountains province is characterized by steep, tall mountains that contain a range of vegetation types transitioning from grasses and sagebrush at

low elevations to alpine species occurring on the highest peaks. The Wasatch Range is located at the edge of the Middle Rocky Mountains and the Basin and Range provinces, and as such, shares characteristics with both provinces. The most distinctive element of the Wasatch Range is its abrupt, wall-like western front with steep V-shaped canyons. In contrast, the eastern edge of the Wasatch Mountains more smoothly transitions into the adjacent, rolling mountainous landscapes. Similarly, the Uinta Mountains are located at the edge of the Middle Rocky Mountains and Uinta Basin resulting in the mountains rising prominently above the expansive, level-to-rolling Uinta Basin.

The BLM VRI is available for most parcels. The inventory of scenic quality identified areas of Class A, B, and C associated with BLM and SITLA parcels. The BLM identified areas of high, moderate, and low visual sensitivity for these parcels with most of the parcels located within the BLM F/M distance zone. VRI Classes for land exchange parcels range from VRI Class I, where located within special areas with existing management requiring maintenance of a natural landscape, including designated wilderness areas and WSAs; to VRI Class II to IV, if not located within a special management area, depending on the scenic quality class, sensitivity level, and distance zone inventoried. One set of parcels to be transferred to SITLA within the Salt Lake BLM FO (parcels 15, 17, and 20, which are currently administered by the BLM) does not have VRI data, including scenic quality, sensitivity levels, distance zones, or VRI Classes.

3.19.1.1.2 Viewing Locations

Views toward land exchange parcels can occur from residential areas, recreation sites and dispersed recreation areas, and travel ways. Because the parcels are not located in or adjacent to major communities, residential views are anticipated to mostly occur from dispersed, rural residences located in proximity to other public lands. Views from more concentrated residential areas occur adjacent to St. George, for equalization parcels located within the Red Cliffs NCA. Views of land exchange parcels are also anticipated from the following key recreation areas within the analysis area:

- Red Cliffs and John Wesley Powell NCAs
- Grand Staircase-Escalante National Monument
- The greater San Rafael Swell area
- The Green River corridor (including both a wild river and scenic river section),
- Wilderness areas (see Section 3.17.1.1.2 for list).

The analysis area also includes LWCs such as Behind the Rocks and Desolation Canyon. Views are also possible from interstate, U.S., and state highways (e.g., Interstate 15, Interstate 70, U.S. Highway (US) 6, US-40, US-89, US-189, US-191, Utah State Route (SR) 9, SR-10, SR-16, SR-21, SR-24, SR-36, and SR-257), as well as from designated scenic byways, including the Dinosaur Diamond Scenic Byway and Zion Park Scenic Byway.

3.19.1.1.3 BLM Visual Resource Management Classes

BLM parcels within the analysis area are assigned VRM Classes as follows (Table 3.19-1 provides VRM Class objective definitions):

- VRM Class I: None

- VRM Class II: Parcels 3, 3S, 7C, 32, 36, 37, 38, 39, 46, 47, and 48
- VRM Class III: Parcels 1, 2, 2S, 3, 3S, 4, 5, 5S, 8, 21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 35, 36, 38, 38M, 38S, 39, 39S, 42, 43, 44, 50, 53, and 54
- The remaining BLM parcels are assigned as VRM Class IV.[22] The following parcels also include VRM Class IV: 1, 2, 2S, 3, 3S, 5, and 5S.

Some SITLA parcels within the PFO (SE127, SE135A, SE137, SE142, SE159, and SE164) were given a VRM Class in error (mostly VRM Class I or II, with one parcel including an area of VRM Class III). Since these VRM Classes were not assigned through BLM resource management planning, and because these management class values are not associated with current SITLA management, the VRM Classes for these parcels are not included in the analysis but could provide insight into future efforts to assign BLM VRM Classes to these newly acquired lands.

3.19.1.2 Management Framework

The BLM manages visual resources under the VRM system, including the assignment of VRM Classes for all BLM-administered land through BLM RMPs and MPFs. As described in BLM Manual H-8410-1, VRM Classes are a management objective that identify the allowable level of disturbance and noticeability (i.e., visual contrast) for all proposed surface disturbing management activities (BLM 1986a). The objectives associated with each VRM Class are defined in Table 3.19-1.

For BLM parcels, the VRM Classes ranges from Class II to Class IV as identified in applicable RMP/MFP documentation. VRM Classes within the analysis area were established through BLM FO RMPs. These RMPs also include specific additional management direction associated with visual resources, including best management practices (BMPs) and visual-specific mitigation measures. Additionally, BLM Manual 8431-1 (BLM 1986b) and *Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands* (BLM 2013) outline visual-specific mitigation measures and techniques to reduce visual contrast regardless of the VRM Class wherein proposed surface-disturbing activities could occur.

Table 3.19-1. BLM VRM Classes

VRM Class	Objective
Class I	Preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change (contrast) to the characteristic landscape should be very low and must not attract attention.
Class II	Retain the existing character of the landscape. The level of change (contrast) to the characteristic landscape should be low. Management activities could be seen but should not attract 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.

[22] Parcels 46C, 51M, 52M, 53M, and 53OG only convey subsurface mineral rights; therefore, these federal parcels are not evaluated in this section.

VRM Class	Objective
Class III	Partially retain the existing character of the landscape. The level of change (contrast) to the characteristic landscape should be moderate. Management activities could 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.
Class IV	Provide for management activities that require major modifications of the existing character of the landscape. The level of change (contrast) to the characteristic landscape can be high. These management activities could 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.

Source: BLM (1986b).

Because SITLA does not identify VRM Classes for lands they manage, SITLA parcels do not have an assigned VRM Class. SITLA does not have any visual-specific resource policies or management objectives such as BMPs or other specific mitigation measures. The BLM VRI provides information on the existing visual setting for SITLA-managed land, but these lands are not subject to the BLM VRM system or VRM Classes.

3.19.2 Proposed Action

Under the land exchange, potential changes in future land uses, identified in Table 3.1-1 in Section 3.1.1, could occur on 28 BLM parcels conveyed to SITLA with assigned BLM VRM Classes (Table 3.19-2). Many of these BLM parcels are assigned by the BLM as VRM Class IV, which allows management activities to dominate the view and be the major focus of viewer attention (see Table 3.19-1 for definitions of each VRM Class). Additionally, since the anticipated future land use was already considered under previous management, a parcel-specific analysis for these Class IV parcels was not conducted.

BLM parcels were evaluated on a parcel-specific basis if they are associated with:

1) more restrictive assigned VRM Classes (VRM Class II or III) where the anticipated future land use was not considered under previous management (1, 26, and 28–30)
2) where the anticipated future land use was considered under previous management but a more restrictive VRM Class (VRM Class II or III) is currently assigned (8, 23, 25, 27, 35–38, 38S, 39, 39S, 42–44, 46–48, 50, 53, and 54).

Additionally, a general analysis of potential impacts to scenery, impacts to views, and conformance with BLM VRM Class objectives, associated with the land exchange for all BLM and SITLA parcels, is provided in Sections 3.19.3.1.1 to 3.19.3.1.2.

Table 3.19-2. BLM VRM Class Acreage by BLM Parcels with Potential Changes in Future Land Uses

Parcels	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
6	0	0	0	173
8	0	0	929	0
15	0	0	0	52
17	0	0	0	260
23	0	0	594	40
25	0	0	221	579

Parcels	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
26	0	0	882	0
27	0	0	117	0
28	0	0	4,911	0
29	0	0	239	0
30	0	0	633	0
35	0	0	993	1,398
36	0	1,303	533	2,120
37	0	575	0	64
38	0	648	8,334	8,979
38S	0	0	399	283
39	0	118	1,474	1,381
39S	0	0	655	0
42	0	0	2,279	637
43	0	0	213	908
44	0	0	301	0
46	0	1,255	0	0
47*	3	872	0	0
48*	3	1,891	0	0
50	0	0	890	1
53	0	0	674	972
54	0	0	5,756	0

* Identified VRM Class I areas were a result of an edge matching issue between the BLM VRM Class and parcel data. No BLM lands in wilderness or similar management would be transferred to SITLA.

3.19.2.1.1 Scenery

Construction, operation, and decommissioning of anticipated future land uses would modify the existing landscape character on affected BLM parcels. The degree of landscape character modification would be most intense where more restrictive VRM Classes are currently assigned (VRM Class II or III) and anticipated future land uses would modify identified high-quality landscapes. The BLM VRI Classes, scenic quality, sensitivity levels, and visual distance zones for each evaluated BLM parcel (i.e., where potential changes in future land use was identified) are presented in Table 3.19-3.

The most intense potential impacts to scenic quality would occur on parcels 46, 47, and 48, which were inventoried as Class A scenic quality and managed as VRM Class II by the BLM. Potential impacts could occur from proposed underground mineral exploration and ROW development because these projects would not have to meet VRM Class II objectives, likely resulting in increased visual contrast and effects on landscape character.

Additionally, parcels 23, 28, 30, 36, 42, 43, 44, 46, 47, and 48, were inventoried as being located within high sensitivity landscapes and in areas managed by the BLM as either VRM Class II or III. Anticipated future land uses on these parcels, including residential and industrial development, ROW projects, mineral exploration (including underground), and solar

development would contrast with the existing landscape character. Because these anticipated future land uses would not be required to meet VRM Class II or III objectives under SITLA management, these projects would likely result in increased visual contrast and effects on landscape character in highly visually sensitive areas compared to projects developed under BLM management.

Most BLM parcels are located within the BLM F/M visual distance zone (less than 5 miles from inventoried observation points or travel routes) where proposed management activities could easily be seen. Potential impacts to views from specific viewing locations, including those associated with the development of the BLM's visual distance zones, are described in the following Viewing Locations section. Parcels 36, 46, 48, and 54 include areas within the BLM background visual distance zone (between 5 and 15 miles from inventoried observation points or travel routes) where anticipated management activities (mining exploration and ROW development) could be visible, but views at this distance would be mostly focused on massing and layout of these activities, including proposed landform and vegetation manipulations.

Based on the BLM's inventory of scenic quality, sensitivity level, and visual distance zones, VRI Classes were identified by the BLM to indicate overall existing scenic values with most parcels located within VRI Class III or IV areas. Portions of parcels 23, 42, 43, 44, 46, 47, and 48 were inventoried as VRI Class II, where the landscape was determined to have high existing scenic value. Impacts to high quality and high sensitivity landscapes, resulting from anticipated future land uses as described above, could occur because these projects would not be required to meet VRM Class II or III objectives, likely resulting in increased contrast within inventoried VRI Class II areas.

Table 3.19-3. BLM VRI Class and Associated Inventory Components by BLM Parcel with Potential Changes in Future Land Uses (in acres)

Parcels	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	High Sensitivity Level	Moderate Sensitivity Level	Low Sensitivity Level	Visual Distance Zone: F/M	Visual Distance Zone: Background	Visual Distance Zone: Seldom Seen
6	0	0	0	173	0	173	0	0	173	0	173	0	0
8	0	0	929	0	0	929	0	0	929	0	929	0	0
15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
23	0	91	304	248	0	120	523	367	277	0	643	0	0
25	0	0	709	134	0	708	134	0	843	0	843	0	0
26	0	0	823	0	0	827	0	0	893	0	893	0	0
27	0	0	105	16	0	105	16	0	121	0	121	0	0
28	0	0	724	4,196	0	0	4,920	723	4,197	0	4,920	0	0
29	0	0	0	241	0	0	241	0	241	0	241	0	0
30	0	0	353	285	0	0	638	353	0	285	638	0	0
35	0	0	0	2,392	0	0	2,392	0	1,839	553	2,392	0	0
36	0	0	2,068	2,052	0	4,122	0	238	2,073	1,809	3,640	482	0
37	0	0	0	639	0	639	0	0	0	639	639	0	0
38	0	0	797	17,189	0	1,823	16,164	0	3,325	14,661	17,986	0	0
38S	0	0	0	682	0	0	682	0	91	591	682	0	0
39	0	0	0	2,973	0	654	2,318	0	0	2,973	2,973	0	0
39S	0	0	0	655	0	91	565	0	0	655	655	0	0
42	0	2,685	0	230	0	2,685	230	2,685	0	230	2,916	0	0
43	0	1,121	0	0	0	1,121	0	1,121	0	0	1,121	0	0
44	0	205	96	0	0	301	0	205	96	0	301	0	0
46	0	1,074	207	0	1,075	0	207	1,281	0	0	568	713	0
47*	3	756	115	0	760	0	115	874	0	0	874	0	0
48*	2	1,893	0	0	1,895	0	0	1,895	0	0	875	1,020	0
50	0	0	895	0	0	897	0	0	897	0	897	0	0
53	0	0	0	1,615	0	263	1,352	0	0	1,615	1,615	0	0
54	0	0	0	5,756	0	0	5,756	0	0	5,756	1,952	3,805	0

Note: N/A = not present on BLM parcels.

* The identified VRI Class I areas were a result of an edge matching issue between the BLM VRI Class and parcel data.

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More generally, any future projects or management actions on parcels transferred to SITLA would not be required to meet VRM Class objectives and could result in increased impacts to high quality and highly sensitive landscapes (VRI Class II, Class A scenic quality, and high sensitivity level areas), especially where more restrictive VRM Classes are currently assigned by the BLM (VRM Class II or III).

SITLA parcels to be transferred to the BLM would increase the acres under BLM management within high quality and highly sensitive landscapes (i.e., VRI Class I and II, Class A scenic quality, and high sensitivity level areas). Table 3.19-4 identifies the total acreage of the parcels to be transferred to the BLM and to SITLA within the BLM's VRI Classes and associated inventory components (scenic quality, sensitivity levels, and distance zones). For the parcel-by-parcel BLM VRI Class and associated inventory components acreages, refer to Appendix F. Because the BLM manages visual resources based on VRM Classes, which have not yet been assigned for the parcels to be transferred to the BLM, it is not known how many of these acres would be assigned a more restrictive VRM Class (VRM Class I, II, or III). It is anticipated that because many of these parcels are located within wilderness areas or other specially designated areas (e.g., VRI Class I), more restrictive VRM Classes would be assigned, affording further protection for these high quality and highly sensitive landscapes.

Table 3.19-4. Total BLM VRM Class and Associated Inventory Components for All Parcels

VRI Class	SITLA Parcel Acreage	BLM Parcel Acreage
Class I	27,904	5*
Class II	69,100	9,083
Class III	12,581	10,705
Class IV	6,389	69,792
Scenic Quality		
Class A	36,767	4,981
Class B	66,524	23,006
Class C	12,388	61,612
Sensitivity Levels		
High	112,279	11,617
Moderate	2,783	39,493
Low	742	38,881
Visual Distance Zones		
F/M	92,039	77,332
Background	22,163	12,660
Seldom seen	1,603	0

* The VRI Class I area was a result of an edge matching issue between the BLM VRI Class data and parcel data.

3.19.2.1.2 Viewing Locations

Views on affected BLM parcels would be modified if future land uses are implemented, especially where current BLM management has protected the viewshed using more restrictive VRM Class objectives (VRM Class II or III). Private recreation development on parcel 26 (not permittable under BLM management) within an area currently designated as VRM Class III, could attract attention from Millsite State Park. Industrial development proposed on Parcels 28,

29, and 30 would not be permitted under BLM management and could attract attention from Interstate 70 and be visible from US-6 (Dinosaur Diamond Scenic Byway), within an area currently designated as VRM Class III. Because management of these parcels would be transferred from BLM to SITLA, private development and industrial projects would be permittable on these parcels, and these projects would not be required to meet BLM VRM Class objectives through a visual contrast rating analysis. This would likely result in increased levels of visual contrast because these projects could attract more attention in the landscape from these identified viewing locations.

Residential and resort development on parcels 6, 15, and 17 could attract attention from residential areas adjacent to Eagle Mountain and Saratoga Springs (parcel 6) or from US-189 near Jordanelle State Park (parcel 15 and 17). These projects would not be permittable under BLM management but occur in an area currently designated as VRM Class IV, which allows projects to dominate the view and be the major focus of viewer's attention.

Other reasonably foreseeable future land uses on BLM parcels are anticipated to continue to consist of livestock grazing, ROWs, commercial guided hunting, and dispersed recreation activities (see Table 3.1-1). Any temporary, localized visual impacts associated with these actions would occur regardless of the land exchange because these actions already occur on the landscape.

Because the anticipated future land uses on BLM parcels transferred to SITLA would not be required to conduct a visual contrast rating analysis, these projects could attract additional attention and potentially dominate views from sensitive viewing locations, especially where located in areas currently managed with more restrictive BLM VRM Classes (VRM Class II or III). Mineral development on parcels 35, 36, 37, 38, 38S, 39, and 39S (currently designated as VRM Class II and III) could be visible from and attract attention from US-6 and SR-36. Similarly, underground mineral exploration and ROW development on parcels 46, 47, and 48 (currently designated as VRM Class II) could be visible from and attract attention from US-6 and dispersed use areas in the adjacent Desolation Canyon Wilderness Area. A series of anticipated future land uses (permittable under both BLM and SITLA management) have been proposed on BLM parcels, which are currently managed as VRM Class III by the BLM:

- Parcel 8: Proposed solar development could be visible from residences west of the community of Mona but would occur in an area with extensive utility development, which dominates the existing views to the west.
- Parcels 23 and 25: Proposed solar development could be visible and attract attention from the Green River Cutoff Road and from the community of Castle Dale.
- Parcel 27: Reservoir development could be visible from SR-10 and attract attention in views to the west.
- Parcel 42: Mineral exploration could be visible and attract attention from SR-21.
- Parcel 43 and 44: Mineral exploration would occur in a remote area with few sensitive viewing locations; views of these projects could occur from dispersed recreation areas within the Wah Wah Mountains.
- Parcel 50: Underground mineral exploration could be visible and attract attention from SR-10.

- Parcel 53: Oil and gas exploration and ROW development could be visible from and attract attention from adjacent dispersed residences.
- Parcel 54: Mineral exploration and ROW development would occur in a remote area with few sensitive viewing locations; views of these projects could occur from dispersed recreation areas within the San Rafael Desert.

Because these projects would not be required to conduct a visual contrast rating analysis to meet VRM Class III objectives, it is anticipated these foreseeable future land uses would attract more attention and, in some locations, could dominate views from sensitive viewing locations.

More generally, the transfer of all BLM parcels currently managed with a more restrictive VRM Class (VRM Class II or III) to SITLA could allow increased levels of visual contrast associated with any future projects or management actions. A visual contrast rating analysis, which would assess the level of visual contrast viewed from adjacent viewing locations, would not be required. These effects would be most intense where these future projects would be located in proximity to highly sensitive viewing locations such as scenic byways, recreation sites, or residential areas.

The transfer of SITLA parcels to the BLM would, in general, result in decreased potential impacts to views because each future project or management action would be required to conduct a visual contrast rating analysis to assess conformance with assigned BLM VRM Classes. Parcels assigned a more restrictive VRM Class (VRM Class I, II, or III) by the BLM, through future land use planning efforts, would facilitate protection of adjacent views through the management of visual contrast.

3.19.2.1.3 BLM Visual Resource Management Classes

As described previously, the transfer of BLM parcels from BLM to SITLA management would remove the requirement to conduct a visual contrast rating analysis to meet designated BLM VRM Class objectives. BLM-required BMPs and mitigation measures, identified as part of the visual contrast rating analysis, would not be applied to these anticipated future land uses to reduce visual contrast. Broad-scale management of sensitive views and high-quality landscapes by the BLM, using VRM Classes and other visual management objectives, would be diminished in these areas, resulting in potential modification of views from adjacent lands remaining in BLM management and on the area's general landscape character.

Table 3.19-5 identifies the total acreage of each VRM Class for BLM parcels to be transferred to SITLA; details for each parcel are provided in Appendix F. Effects on future management of adjacent BLM parcels would be most intense where more restrictive VRM Classes were previously assigned by the BLM (VRM Class II or III) and where the parcel is located within high quality and highly sensitive landscapes or in proximity to highly sensitive viewing locations such as scenic byways, recreation sites, or residential areas.

Table 3.19-5. BLM Visual Resource Management Class for All Parcels

VRM Class	Acres
Class I	6*
Class II	7,226
Class III	42,289
Class IV	36,073

* The VRM Class I area identified was a result of an edge matching issue between the BLM VRM Class and parcel data. No BLM lands in wilderness would be transferred to SITLA.

Because SITLA does not identify VRM Classes or similar management prescriptions to manage visual resources, the transfer of parcels to the BLM would, in general, result in increased protection, especially where more restrictive VRM Classes (VRM Class I, II, or III) would be assigned through future land use planning efforts. Additionally, many of the parcels to be transferred to the BLM are located within wilderness areas or other specially designated areas, which would likely be assigned VRM Class I, to preserve the existing character of the landscape and would only allow very limited management activity. Long-term beneficial impacts are anticipated for these parcels, especially where located within high quality and highly sensitive landscapes, or within the viewshed of highly sensitive viewing locations.

3.19.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to landscape character or views from identified viewing locations resulting from reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.19.4 Cumulative Impacts) could result in impacts in the visual resource analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. For BLM-administered lands, this includes conforming to assigned VRM class objectives and associated RMPs. Continuation of the coal leasing moratorium would likely benefit visual resources because reclamation of coal mining on BLM parcels 46–50 and 46C could help reduce visual contrast and effects on landscape character, particularly for areas mapped to more restrictive VRM classes. This EA anticipates that any future land uses after reclamation is complete would be consistent with VRM class objectives and would not adversely affect landscape character or views.

3.19.4 Cumulative Impacts

Based on estimated reasonably foreseeable residential development; proposed hydrogen, solar, oil and gas, and helium generation; and pipeline, transmission/substation, telecommunication, recreation, and road construction project footprints listed in Table 3.1-3, up to an estimated 232,405 acres of future activities (excluding actions already in operation or in effect) could have a temporary to long-term adverse impact due to visual changes associated with human activity, traffic, and vegetation alteration. Additionally, five current wind and solar farms, one power plant, and transmission lines are evident throughout the visual resource analysis area and would continue to influence viewers because they are taller than existing vegetation. This EA estimates that up to 90,823 acres of existing and proposed disturbance would occur where more restrictive VRM classes are currently assigned (VRM Classes I–III). The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

As discussed in Section 3.19.3, reasonably foreseeable land actions that could occur after the land exchange could impact up to 37,689 additional acres of land on BLM parcels where more restrictive VRM classes are currently assigned (VRM Class II or III), which would attract more attention and, in some locations, could dominate views from sensitive viewing locations. Transfer of BLM parcels to SITLA management would remove the requirement to conduct a visual contrast rating analysis to meet designated BLM VRM class objectives as well as the application of BLM-required BMPs and mitigation measures. However, the transfer of approximately 116,000 acres of SITLA parcels to the BLM would, in general, result in decreased potential impacts to views due to conformance with assigned BLM VRM classes, especially where more restrictive VRM Classes (VRM Class I, II, or III) would be assigned. This includes parcels located within wilderness areas or other specially designed areas which would be assigned VRM Class I through the BLM RMP process to preserve the existing character of the landscape.

Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

3.20 Water Resources

Water resources is a broad topic that involves water science (water quantity, water quality), economic and personal uses (water rights), and environmental factors (hydrologic conditions). Where data are available, an effort has been made to assess any downstream effects from potential land exchange impacts beyond the *water resources analysis area*.

3.20.1 Affected Environment

3.20.1.1 Parcel-Specific Conditions

The USGS classifies watersheds into various hydrologic unit codes (HUCs) at six levels. The parcels in the land exchange span nine level-four (HUC 8) subbasins: the Escalante Desert-Sevier Lake (HUC 160300), Great Salt Lake (HUC 160203), Jordan (HUC 160202), Lower Colorado-Lake Mead (HUC 150100), Lower Green (HUC 140600), Upper Bear (160101), Upper Colorado-Dirty Devil (HUC 140700), Upper Colorado-Dolores (HUC 140300), and Weber (HUC 160201). These subbasins are part of the larger, level-one (HUC 2) basins: the Upper Colorado and the Great Basin Regions, which include parts of six states: Nevada, Utah, Idaho, Colorado, Wyoming, and Arizona.

3.20.1.1.1 Surface Waters and Water Quality

Based on National Hydrography Dataset mapping, the water resources analysis area has a total of approximately 730 miles of mapped ephemeral, intermittent, and perennial streams (Table 3.20-1). Several important watercourses are present in the vicinity of the analysis area, including the Green River, San Rafael River, Price River, and Millsite Reservoir. The water resources analysis area also contains approximately 23 miles of canals and other human-made waterways (USGS 2022).

Table 3.20-1. Mapped Potential Waters of the United States in the Analysis Area

Water Resource	Total Miles	Parcels Where Present*
Artificial path	11	1, 2, 4, 5, 8, 26, 29, 32, 2S, 3S, 5S, SE133, SE150A, SE151, SE172, SE174, SE175, SE189, SE193, SE195, SE204, SE207, SE210, SE213A, SE215, SE224A, SE228, SE231, SE232, SE233, SE253, SE266, SE278, 7B

Water Resource	Total Miles	Parcels Where Present*
Canal/ditch	7	2, 5, 11, 20, 25, 38, 38S, 5S
Connector	4	8, 9, 10, 11, 34, 35, 36, 38, 40, 38S, 39S, SE169, SE170, SE172, SE191, SE207, SE220, SE262
Pipeline	1	35
Stream/river: ephemeral	160	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 17, 20, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 2S, 38S, 39S, 3S, 5S, 3C, 3D, 7A–7C
Stream/river: intermittent	555	11, 21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 34, 35, 36, 38, 39, 43, 46, 47, 48, 49, 50, 53, 54, 38S, 39S, S285, SE102, SE103, SE104, SE105, SE106, SE107, SE108, SE109, SE110, SE111, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE155, SE156, SE157A, SE157B, SE158A, SE158B, SE161, SE162, SE163, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Stream/river: perennial	15	17, 24, 25, 38, 39, 44, 47, 48, 38S, SE103, SE115, SE119, SE129, SE131, SE133, SE220, SE262, SE276, SE282, SE287A

* Excludes parcels only conveying subsurface mineral rights.

Potential concerns with water quality within the water resources analysis area include stream temperatures, dissolved oxygen levels, and levels of total dissolved solids (TDS), selenium, coliform bacteria levels, and benthic invertebrate assessments (UDEQ 2022a). High stream temperatures and low dissolved oxygen levels are associated with low stream flow conditions but can also be due to lack of riparian vegetation and associated shading. High sediment loads are often associated with natural flood events but can be increased by land use activities upstream in the watershed, including development of roadways and recreational vehicle trails, construction activities, and improper livestock grazing.

Table 3.20-2 discloses watersheds within the water resources analysis area that are CWA Section 303(d)–list impaired; however, no individual water bodies in the land exchange parcels are on the 303(d) list (UDEQ 2022a). All of the impaired watersheds are in the Lower Green subbasin. No equalization parcels are located in CWA Section 303(d)–listed impaired watersheds.

Table 3.20-2. Clean Water Act Section 303(d)–Listed Watersheds in the Water Resources Analysis Area

Impaired Water	Water Quality Parameter	Parcels Present in Watershed
Utah Division of Water Quality (UDWQ) watershed UT14060002-001_00	Temperature, TDS, and benthic invertebrates	27
UDWQ watershed UT14070002-009_00	Invertebrate assessment	SE262, SE282, SE287A
UDWQ watershed UT14060007-015_00	TDS	46–48, SE123–124, SE130–133, SE137–138, SE140–141, SE145
UDWQ watershed UT14060008-002_00	Temperature	SE150A–B, SE152
UDWQ watershed UT14060009-009_00	*Escherichia coli* (*E. coli*)	26
UDWQ watershed UT14060009-010_00	Selenium	23
UDWQ watershed UT14060009-011_00	pH and TDS	23–25
UDWQ watershed UT14060009-014_00	Temperature, invertebrates, and TDS	SE150A, SE151
UDWQ watershed UT14060010-011_02	*E. coli*	SE107–111
UDWQ watershed UT14060010-011_03	*E. coli*	SE101–103, SE106
UDWQ watershed UT14060010-013_00	*E. coli* and dissolved oxygen	SE102–103

3.20.1.1.2 Groundwater and Water Quantity

The water resources analysis area contains the Green River Intake for the city of Green River, Utah (parcels SE140–SE149), as well as a water protection zone for the Muddy Creek Intake (parcel 27), and a water protection zone for the Millsite Intake for Ferron City (parcel 26).

Water availability in Utah is influenced by many factors, including topography and weather patterns, and can be highly variable, although precipitation usually increases in winter and decreases in the summer; however, the last few years have seen a pattern of drought in most of the state, with all of the state in either Extreme or Exceptional Drought, as classified by the U.S. Drought Monitor (UDNR 2021). The State of Utah has developed and implemented a drought response plan intended to systematically respond to drought conditions in the state through increased monitoring, reporting, and coordination among local, state, and federal water users and resource agencies (Utah Division of Emergency Management 2022). Additionally, federal and state agencies provide direct relief and recovery support for drought impacts, including short- and long-term impacts, as well as resources for public health and safety (National Integrated Drought Information System 2022). The results of the drought response plan, as well as monitoring and resources provided by federal agencies through the National Integrated Drought Information System contribute to the types of responses undertaken by water resource managers in the state.

The 2021 *Water Resources Plan* (UDNR 2021) states that "Utah receives an average of 61.3 million acre-feet of water from precipitation each year. Approximately 8.7 million acre-feet per year of water flows into the state through interstate streams. [However], much of the interstate stream water in the Colorado River Basin cannot be used within Utah because it's required to be delivered to the Lower Colorado River Basin states."

Natural systems, including forests, rangelands, riparian habitat, surface waters, and groundwater aquifers, are the largest consumers of precipitation in the state. The remainder of the water is

used for agriculture or municipal and industrial (M&I) uses. In Utah, an average 3.1 million acre-feet of water was diverted annually for agriculture, and 984,000 acre-feet of water was diverted annually for M&I from 1989 to 2020. A portion of this diverted water returns to surface and groundwater sources via runoff, seepage, and reuse. Average annual statewide water depletions (where the water is fully consumed) was 2.8 million acre-feet for agriculture and 491,000 acre-feet for M&I during the same time period (UDNR 2023). M&I water use by counties involved in the land exchange is provided in Table 3.20-3.

Table 3.20-3. 2020 County Summary of Municipal and Industrial Water Use

County	Total Gallons Per Capita Day	Total Use (acre-feet/year)
Beaver	701	4,731.9
Carbon	237	5,569.3
Emery	538	6,588.4
Grand	320	3,862.1
Iron	257	15,087
Juab	366	4,760
Kane	349	3,309.7
Millard	581	6,947.7
Rich	962	1,911.6
San Juan	235	1,811.8
Sevier	467	10,756
Summit	305	12,773.5
Tooele	195	15,329.4
Uintah	252	9,720.3
Utah	243	180,440.6
Wasatch	299	11,061.5
Washington	285	62,823.7
Wayne	943	2,381.8

3.20.1.1.3 Water Rights

Appendix A includes a list of water rights within the water resources analysis area by parcel. Water sources vary, including several named and unnamed streams, springs, and underground water wells. Most of the affected water rights are for stock watering and other uses.

Many of the affected water rights are unevaluated or there is some question about their validity; however, all of the hydrologic areas within the state of Utah are currently involved in a court-ordered adjudication of water rights, except for the Weber, Sevier, and Green River drainages, which were adjudicated and decreed in the 1920s and 1930s (Utah Division of Water Rights [UDWRi] 2022). The water rights adjudication process can take many years, as thousands of rights holders, property owners, and stakeholders must be personally served with notice, in accordance with due process requirements (Best Best and Krieger 2023).[23]

[23] The status of specific basin adjudications in Utah can be found at the UDWRi adjudication website (https://www.waterrights.utah.gov/adjstatus/default.asp).

3.20.1.2 Management Framework

Water rights in Utah are regulated by the UDWRi, and all water rights in the state of Utah are considered public property. A water right is a right to divert (remove from its natural source) and beneficially use water. Elements of most water rights include a defined nature and extent of beneficial use, a priority date, a defined quantity allowed for diversion by flow rate or volume, a specified point of diversion and source, and a specified place of beneficial use (UDWRi 2011).

The exchange parcels are in watersheds that have been assessed for meeting state water quality standards, in accordance with the CWA, and range from meeting standards to requiring a total maximum daily load allocation. State water quality regulations for meeting beneficial uses and drinking water protection zones apply to both SITLA and BLM parcels. Additionally, local ordinances with respect to wetlands, riparian areas, and floodplains could apply (see Sections 3.20 and 3.7).

3.20.2 Proposed Action

3.20.2.1 Water Quality

Under the land exchange, a total of approximately 255 miles of mapped surface waters would be present on parcels with surface estate conveyed to SITLA and a total of approximately 501 miles of mapped surface waters (of which equalization parcels if needed for value equalization purposes would account for 6 miles) would be present on parcels with surface estate conveyed to the BLM (see Table 3.20-1). Of this total, potential changes in future land uses on 44 BLM parcels conveyed to SITLA could result in changes to water quality. Table 3.20-4 provides a more detailed analysis of BLM parcels that are located in CWA Section 303(d)–listed watersheds and that could be more vulnerable to water quality changes as a result of future land use changes.

More generally, construction and operation activities for reasonably foreseeable residential, recreation, or industrial development, mineral exploration, and oil and gas leasing activities that could occur after the land exchange on BLM parcels (as identified in Table 3.1-1) with mapped surface waters could increase erosion and sedimentation into surface waters from stormwater runoff, cause a reduction in streamflow, or potentially introduce contaminants into surface water resources through accidental spills or releases. Engineering controls (e.g., spill containment) and stormwater pollution prevention plans, if applied, would help minimize these impacts.

A discussion of the potential impacts of future land use development to drainage patterns, flow regime, and riparian habitat is provided in Sections 3.7 and 3.21.

Table 3.20-4. Reasonably Foreseeable Future Land Uses, Acreages, and Impacts for BLM Parcels in Clean Water Act Section 303(d)–Listed Watersheds

Parcels	Reasonably Foreseeable Future Land Use	Mapped Surface Waters (miles)	Impacts
23–25	Solar energy development	4	These parcels are in watersheds that are listed for selenium (parcel 23), as well as pH and TDS (parcels 23–25). Potential solar development could impact surface or groundwater quality by use of, or spills of, chemicals used at solar facilities for dust suppression, vegetation management (herbicide), or dielectric fluids (USDOE and BLM 2012).
26	Recreational development	4	Recreational development that could occur after the land exchange on parcel 26 could exacerbate current *E. coli* concerns by introducing human and animal waste, which can impact waterways from sources such as improper dumping; faulty septic tanks or sewer systems; domesticated animals, including pets and livestock; waterfowl and other wildlife; and stormwater runoff (UDEQ 2022b). These water quality impacts could affect adjacent community drinking water because the parcel contains a water protection zone for the Millsite Intake for Ferron City.
27	Future reservoir site	<1	Potential reservoir development could impact water quality in the watershed by altering natural flow patterns,[24] although impoundment design features could help minimize impacts (USGS 2018). Any development-related increase in TDS could adversely affect drinking water quality, because parcel 27 also contains a water protection zone for the Muddy Creek Intake. Although all natural waters contain some dissolved solids, high levels of TDS can impair water use, particularly for water used for drinking or other consumptive uses such as bathing, cooking, and cleaning, as well as for irrigation (USGS 2019).
46–48	Underground coal mining operations	18	Underground coal mining expansion could also exacerbate TDS concerns in the watershed. Recent studies have shown that even relatively low levels of TDS in discharge waters from surface coal mines can negatively impact aquatic biota, including benthic macroinvertebrates. Although the studies primarily focused on surface mining operations, it was found that elevated TDS levels can also be produced by other forms of coal mining, including underground operations (Daniels et al. 2016).

[24] Impoundment impacts to natural flow patterns could include reduction of peak flows during precipitation events, prevention of water reaching a stream segment during low flows, or through changes to seasonal variations in downstream flow or floodplain inundation. These changes could impact areas larger than the reservoir footprint itself (EPA 2022h).

Twenty-six SITLA parcels[25] that would be transferred from SITLA to the BLM are located in CWA Section 303(d)–listed watersheds for water quality (see Table 3.20-2); however, these parcels' future land uses would generally involve natural and cultural resources protection, recreation use, and other existing encumbrances as established in the Dingell Act. Therefore, no appreciable change in land use is expected that would adversely affect present surface waters. Protections afforded to federally managed wilderness areas as described and defined in the Wilderness Act of 1964 and BLM Manual 6340 would likely result in a benefit to watershed health.

3.20.2.2 Water Rights

In total, 82 water rights associated with 50 SITLA parcels (see Appendix A) would be conveyed to the BLM and 47 water rights associated with 17 BLM parcels (see Appendix A) would be conveyed to SITLA. Equalization parcels do not contain water rights. This land exchange would have minimal effect on water right holders, because the change would mostly be administrative in nature; however, because BLM is limited in applying for new water rights for livestock watering (Utah Code 73-3-31), the conveyance of BLM water rights for livestock watering to SITLA could impact the BLM's ability to provide water for livestock grazing operations in the future. The BLM would also relinquish any federally reserved water rights associated with public water reserves that are revoked upon land transfer.

Potential changes to future land use, including solar development, industrial development, mineral exploration, oil and gas leasing, and coal mining, are anticipated for 15 BLM parcels (parcels 8, 11, 24, 25, 28, 33, 36–38, 38S, 46, 48, 49, 53, 54) that contain water rights (predominately for stock watering). If SITLA were to need to alter these water rights to support any future land use changes, the agency would need to follow the change application process that is governed by Utah state law and implemented by the UDWRi.

3.20.2.3 Water Quantity

The administrative conveyance of parcels in the land exchange would not directly contribute to decreases in the quantity of available water resources in the analysis area. However, construction and operation activities associated with reasonably foreseeable residential, recreation, or industrial development; mineral exploration; and oil and gas or helium leasing activities that could occur after the land exchange on BLM parcels (as identified in Table 3.1-1), if implemented, could divert or deplete available surface or groundwater sources in the water resources analysis area. For example:

- Water used for drilling, well completion, and dust suppression for oil and gas or helium development that could occur after the land exchange on BLM parcels 53 and 54 would add to depletions of water. The Tavaputs EIS (BLM 2021) estimates that approximately 2.0 to 3.5 acre-feet of water would be required, per well, for drilling and completion, as well as 28.5 acre-feet of water per year for dust suppression. This consumptive water use, depending on the water source, could reduce spring or surface flows.
- Water used for varied mineral exploration or production that could occur after the land exchange on BLM parcels 34–44 and 46–50 could affect water availability through mine dewatering (e.g., removal and discharge of excess groundwater that has infiltrated into a

[25] Parcels SE101–SE103, SE106, SE107–SE111, SE123, SE124, SE130–SE133, SE137, SE138, SE140, SE141, SE145, SE150A and B, SE152, SE262, SE282, SE287A.

mine or has been intercepted by mining processes) or mining-related subsidence, which has the potential to connect aquifers that were previously disconnected, change the rate and direction of groundwater movement, and change groundwater recharge and discharge rates.

- Water use for solar development that could occur after the land exchange on BLM parcels 8–13, 23–25, and 33 could affect water availability as a result of groundwater withdrawals to support construction and operational needs, such as panel/mirror washing and cooling. A study by Sandia National Laboratories in 2013 estimated water use for utility-scale solar facilities in the western United States to range from 0.2 to 7.0 acre-feet/megawatt during construction, depending on the technology used. During operations, a wet-cooled system was estimated to result in the greater water use, ranging from 1.63 to 21.48 acre-feet/megawatt/year, whereas water use for a dry-cooled system was estimated to range from 0.23 to 2.16 acre-feet/megawatt/year (Sandia National Laboratories 2013).

Continued drought could also contribute to restrictions on the use of water in land exchange parcels, pursuant to the priority of water rights, protections for fish and wildlife, the demands of municipal water supply, recreation, or other needs (UDNR 2022b).

3.20.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to water resources due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.20.4 Cumulative Impacts) could result in impacts in the water resources analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit water resources in the short term because reclamation of BLM parcels 46–50 and 46C would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. In particular, water use associated with the Lila Canyon Mine would not occur, thereby reducing estimated water use in the analysis area by 97 acre-feet/year.

However, future land uses after reclamation is complete could reintroduce the risk of erosion and sedimentation into surface waters, reduce stream flow or spring flow, or potentially introduce contaminants if they cause surface or subsurface disturbance.

3.20.4 Cumulative Impacts

Reasonably foreseeable residential development; proposed hydrogen, solar, oil and gas, and helium generation; and pipeline, transmission/substation, telecommunication, recreation, and road construction projects listed in Table 3.1-3 (excluding actions already in operation or in effect), containing an estimated 846 miles of mapped surface waters, could result in accidental spills that could affect surface or groundwater, or cause temporary to long-term impacts to water resources through alteration of surface water features and streamflow, increased sedimentation, or changes to water quality parameters such as dissolved oxygen and temperature. These future actions could also require new or changed water rights. Additionally, an estimated 198 miles of mapped surface waters present within existing pipeline, oil wells, and solar, wind, or power plant developments could be adversely affected if an accidental spill occurs.

Table 3.20-5 provides annual estimates of water use for reasonably foreseeable projects where sufficient information is available and actions are likely to result in long-term diversions or depletions.

Table 3.20-5. Water Use for Reasonably Foreseeable Projects

Action or Trend	Anticipated Water Use
Escalante Solar I–III, LLC, Milford Solar I, Notch Peak Solar	Based on an estimated total of 744 MW of solar energy production, operational water use is estimated to be 171 to 1,607 acre-feet/year.*
Conventional steam coal power plant (Intermountain Power Project)	Thermoelectric power plants in Utah are equipped with recirculating cooling systems with cooling towers. Therefore, the water use in Utah is estimated to be less than half a gallon per kilowatt-hour (EIA 2018). The plant used approximately 7,233 acre-feet of water in 2020 (Longbottom et al. 2022).
North American Helium	Water would be necessary for drilling completion operations, flowline testing, and dust suppression. Drilling fluids would be recycled from one well to the next with an estimated 15,000 barrels to be disposed of at the end of the four-well project. Additional volumes for the life of project (if the project is commercially viable) include approximately 1,000 barrels for commissioning the gathering system and variable volumes required for dust control on the access roads.
Coal mining (Lila Canyon and Emery Deep)	A 2022 study (Longbottom et al. 2022) states that water rights associated with the Emery Deep Mine have a total capacity of approximately 3,800 acre-feet per year for mining and industrial uses; however, a 2008 DOGM document indicated consumptive losses of 48.5 acre-feet per year (DOGM 2008). ECCR owns several water rights, amounting to 480 acre-feet per year, that may be used at the Lila Canyon Mine (Longbottom et al. 2022). However, the mine's 2022 annual report indicated total consumptive use of 97.41 acre-feet of water per year loss due to mining (DOGM 2022).

* Based on the range for operational water use for a dry-cooled system (Sandia 2013).

As discussed in Section 3.20.3, reasonably foreseeable land actions that could occur after the land exchange could generate surface disturbance on lands containing 179 miles of mapped surface waters, resulting in potential changes to water quality, quantity, or water rights on BLM parcels through erosion and sedimentation into surface waters from stormwater runoff, a reduction in stream flow or spring flow, or potential introduction of contaminants. For context, however, the combined disturbance associated with land exchange future actions and other reasonably foreseeable development would impact less than 1% of mapped surface waters (217,763 miles) in the HUC 8 subbasins that overlap the water resources analysis area.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Additionally, protections in place for water rights through Utah state law, and the application of design features and mitigation measures, such as siting considerations or avoidance measures, would further reduce potential impacts. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

3.21 Wetlands and Riparian Areas

Wetlands are areas that are periodically or permanently inundated by surface water or groundwater and support vegetation adapted for life in saturated soil (U.S. Army Corps of Engineers [USACE] 2022). Riparian areas occur on lands along the edges of rivers, streams, lakes, and other water bodies (NPS 2022). Both wetlands and riparian areas serve important environmental functions and provide benefits to fish, wildlife, and water quality (NPS 2022; USACE 2022).

3.21.1 Affected Environment

Based on National Wetlands Inventory data, there are approximately 2,157 acres of mapped aquatic resources, including wetlands, lakes, ponds, streams, and rivers within the *wetlands and riparian areas analysis area* (USFWS 2022b). Riparian habitat includes approximately 746 miles of mapped ephemeral, intermittent, and perennial streams within the wetlands and riparian areas analysis area (USGS 2022). There are also approximately 375 acres of riparian, marsh, and wet meadow habitat mapped within the wetlands and riparian areas analysis area (LANDFIRE 2022). Further parcel-specific detail is included in 3.21.1.1 below.

3.21.1.1 Parcel-Specific Conditions

Parcels with mapped potential Waters of the United States (WOTUS) are noted by wetland type in Table 3.21-1. Parcels with mapped riparian habitat are noted by habitat type in Table 3.21-2. Parcels with mapped ephemeral, intermittent, and perennial streams are provided in Section 3.20.1.

Table 3.21-1. Mapped Potential WOTUS in the Wetlands and Riparian Areas Analysis Area

Wetland Type	Total Acres	Parcels Where Present*
Freshwater emergent wetland	29	1, 2, 5, 23, 24, 35, 36–39, 42, 44, 46, 53, 38S, 5S, SE151, SE184, SE187, SE201, SE253, SE276, SE278
Freshwater forested/shrub wetland	14	2, 23, 26, 44, 46, SE103, SE154, SE156, SE182, SE186, SE191
Freshwater pond	52	1, 2, 5, 21, 23, 24, 28, 29, 32, 36, 38, 41, 53, 2S, 3S, 5S, SE110, SE111, SE171, SE173, SE187, SE190, SE191, SE193, SE195, SE201, SE207, SE210, SE213A, SE215, SE228, SE231, SE232, SE233, SE273, SE278, SE282
Lake	550	4, 26
Riverine	1,430	Most BLM and SITLA parcels, 3C, 3D, 7A–C

* Excludes parcels only conveying subsurface mineral rights.

Table 3.21-2. Mapped Riparian Habitat in the Wetlands and Riparian Areas Analysis Area

Riparian Habitat	Total Acres	Parcels Where Present*
Rocky Mountain Lower Montane-Foothill Riparian Shrubland	169	1, 2, 4, 5, 17, 23, 53, 5S, SE114, SE174, SE187, SE220, SE282
Interior West Ruderal Riparian Scrub	59	4, 9, 11, 12, 23–25, 32, 5S, SE129, SE133, SE137, SE150A, SE151, SE156, SE174, SE182, SE186, SE195, SE215, SE220, SE261, SE262, SE275, SE282, SE287A

Riparian Habitat	Total Acres	Parcels Where Present*
North American Arid West Emergent Marsh	58	2, 4, 5, 11, 12, 24, 25, 32, 38, 5S, SE133, SE150A, SE174, SE186, SE220, SE275, SE282, SE287A
Rocky Mountain Lower Montane-Foothill Riparian Woodland	55	1, 2, 4, 5, 17, 23–25, 32, 34, 5S, SE112, SE114, SE115, SE122, SE129, SE133, SE137, SE151, SE174, SE182, SE186, SE220, SE282
Western North American Ruderal Wet Meadow and Marsh	55	1, 4, 5, 24, 5S, SE261
Great Basin Foothill and Lower Montane Riparian Shrubland	25	35, 38, 38S
Interior West Ruderal Riparian Forest	8	23, 25, SE133, SE150A, SE151, SE174, SE220, SE282, SE287A
Great Basin Foothill and Lower Montane Riparian Woodland	2	36, 43, 44, 38S
Great Basin Foothill and Lower Montane Riparian Herbaceous	1	11, 38
Rocky Mountain Subalpine-Montane Riparian Shrubland	1	44
Rocky Mountain Alpine-Montane Wet Meadow	<1	5, SE174

* Excludes parcels only conveying subsurface mineral rights. No equalization parcels contain mapped riparian habitat.

3.21.1.2 Management Framework

Statutes, regulations, and other guidance that inform activities associated with both jurisdictional waters and non-jurisdictional waters include the following:

- The CWA (33 USC 1251 et seq.) establishes the basic structure for regulating discharges of pollutants into WOTUS and regulating quality standards for surface waters. Both the BLM and SITLA are required to adhere to all provisions within this law regarding water quality.
    - CWA Section 401 requires that a federal agency many not issue a permit or license to conduct any activity that could result in any discharge to WOTUS without a water quality certificate or waiver of the certificate.
    - CWA Section 404 establishes a program to regulate the discharge of dredged or fill material into WOTUS, including wetlands.
    - On May 25, 2023, the U.S. Supreme Court issued the *Sackett v. EPA* decision narrowing the interpretation of federal WOTUS. Specifically, the court determined that wetlands on the Sackett property, located in northern Idaho, were not subject to federal CWA regulations because they are distinguishable from any other jurisdictional water. In essence, the opinion determined that the CWA extends to only those wetlands with a "continuous surface connection to bodies that 'are Waters of the United States' in their own right," so that they are "indistinguishable" from those waters. In addition, the decision abandoned the significant nexus test for adjacent wetlands. Overall, the *Sackett v. EPA* decision narrowed WOTUS under the regulatory agencies' authority to regulate wetlands.

- EO 11990 tasked federal agencies with providing leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the beneficial values of wetlands.
    - Among other requirements, section 4 of EO 11990 requires that when federally owned wetlands or portions of wetlands are proposed for lease, easement, ROW, or disposal to public or private parties, agencies reference restricted uses identified under state or federal wetland regulations.
- BLM RMPs establish management goals, objectives, and decisions for protecting water resources. These plans do not apply to SITLA lands.
- BLM Manual 1703-6 (BLM 2009a) establishes policy for management of wastewater and stormwater and compliance with relevant federal and state environmental regulations. This policy does not apply to SITLA lands.
- Under Utah Code 73-3-29 Relocation of Natural Streams, the State of Utah regulates "natural streams" and any state agency, county, city, corporation, or person could not relocate any natural stream channel or alter the beds and banks of any natural stream without first obtaining the written approval of the state engineer.
- Relevant local ordinances, management plans, or county plans regarding wetland and riparian management could apply for SITLA parcels.

3.21.2 Proposed Action

Table 3.21-3 summarizes acres of mapped wetlands and riparian areas present on parcels with surface estate that would be conveyed to SITLA or BLM under the land exchange.

Table 3.21-3. Mapped Wetlands and Riparian Areas Conveyed within the Land Exchange

Parcel Type	Mapped Wetlands (acres)	Mapped Riparian Areas (acres)
BLM parcels	1,141	362
SITLA parcels	916	71
Equalization parcels	17	0

Note: Excludes parcels only conveying subsurface mineral rights. Equalization parcels would only be conveyed if needed for value equalization purposes.

Of this total, potential changes in reasonably foreseeable future land uses on 35 BLM parcels conveyed to SITLA could result in wetland and riparian habitat loss and changes to wetland quality or result in alteration of drainage patterns, removal of vegetation, and soil disturbance in riparian areas, as further described in Table 3.21-4. For all other BLM parcels, no impact to wetlands and riparian areas is anticipated based on reasonably foreseeable future land uses disclosed in Table 3.1-1.

Regardless of the type of development that may occur on BLM parcels, if the activity were to occur in an area with jurisdictional waters as currently defined by the *Sackett v. EPA* decision, a Section 404 permit from the USACE would be required for the development to proceed. It is unknown if jurisdictional waters, including wetlands, are present in the parcels proposed for exchange; however, CWA Section 404 compliance would ensure that impacts to all jurisdictional waters, including wetlands, would be avoided or properly permitted through the USACE.[26] Any

[26] Under the *Sackett v. EPA* decision, the number of aquatic resources within regulatory agency authority is anticipated to be lower than under previous definitions of WOTUS.

non-jurisdictional waters, including wetlands and riparian areas, that may be present on BLM parcels being transferred to SITLA would not be covered by the CWA; these parcels would also no longer be subject to BLM RMP goals, objectives, and decisions for water resource protection; however, EO 11990 requires that the BLM reference in the conveyance that, in the event that wetlands are identified, certain uses are restricted under the applicable federal, state, or local wetland regulations. This could help minimize potential adverse impacts to any wetlands that could be present on the parcels to be conveyed to SITLA. Utah Code 73-3-29 would protect "natural streams" as defined by the state and would require a stream alteration permit to impact the "natural stream." Additional local ordinances or potential future state wetland protection requirements could also apply.

Thirty SITLA parcels[27] and five equalization parcels contain mapped wetlands. Generally, all of the SITLA lands to be conveyed to the BLM and any equalization parcels (if needed for value equalization purposes) would be managed for natural and cultural resources protection and be available for recreation use or other existing encumbrances as established in the Dingell Act. Conveyance of SITLA and equalization parcels to the BLM could provide a benefit by creating a more contiguous ecosystem and increased management oversight for wetlands and riparian areas, as established in BLM RMPs and other relevant guidance.

[27] SE103, SE110, SE111, SE151, SE154, SE156, SE171, SE173, SE182, SE184, SE186, SE187, SE190, SE191, SE193, SE195, SE201, SE207, SE210, SE213A, SE215, SE228, SE231, SE232, SE233, SE253, SE273, SE276, SE278, SE282.

Table 3.21-4. Reasonably Foreseeable Future Land Uses, Acreages, and Impacts by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Mapped Wetlands (acres)	Mapped Riparian Area (acres)	Impacts
6	Residential development	1	0	Without specific project details, potential impacts to wetlands in this parcel are limited to generalized impacts typically associated with wetland development, including removal of vegetation, filling, grading, construction, and changes in water levels and drainage patterns (Maryland Department of the Environment 2022).
8–13, 23–25	Solar energy development	49	20	The level of impacts to wetlands and riparian areas would depend on the specific characteristics of the proposed solar development. As discussed in Section 3.7, electrical equipment and panels could be raised aboveground; however, the installation of the panels themselves and the racking system to hold the panels would require ground disturbance and excavation that could adversely impact wetlands. Associated infrastructure, such as access roads, could also compact and disturb wetlands. Potential riparian impacts would be as described for mineral exploration.
17, 26	Recreational development	20	<1	According to the 2022 finding of no significant impact for the Mayflower Resort (parcel 17), adverse effects associated with water resources would not be significant based on the degree of effects and design features integrated into the resort development (BLM 2022i). Parcel 26 could be developed as recreational sites. Depending on the level of construction needed for such development, and the placement of the cabin or tent sites and any associated facilities (restroom facilities, access roads, parking areas, etc.) within the parcels, wetlands could be impacted by dredging or filling from construction activity. Applicable state and local regulations and ordinances could dictate where, and if, development could occur where wetlands or riparian areas are present.
28–30	Industrial development	36	0	See residential impacts, above.
34–44, 54, 38S, 39S	Mineral exploration	296	29	Mineral exploration is a broad term that can range from basic prospecting to sophisticated technological data analysis (White 2005) and generally follows a sequence of activities, starting with initial site reconnaissance, discovery of minerals, prospecting, and economic mining (Haldar 2018:69–84). Potential impacts to wetlands would depend on the type of exploratory activities (Victoria State Government 2022) but could include both wetland loss and changes to wetland quality through increased sediment deposition, dust formation on vegetation (which inhibits photosynthesis), alteration of long-term wetland hydrology, and residual effects resulting from the fragmentation of wetland habitats. Similarly, exploration activities could result in a range of riparian habitat impacts such as alteration of drainage patterns, removal of vegetation, and soil disturbance.

Parcels	Reasonably Foreseeable Future Land Use	Mapped Wetlands (acres)	Mapped Riparian Area (acres)	Impacts
46–50	Underground coal mining operations	39	0	No direct wetland or riparian impacts are anticipated because the mining would occur under the soil surface; however, there is evidence that suggests that mining beneath wetlands can cause the wetland to dry out (Duong 2019). Additionally, heavy equipment used to develop the site, transport workers and materials, and excavate materials (European Business Review 2021) could result in soil compaction or other impacts to wetland function.
53	Lease potential for oil and gas	17	<1	If oil and gas development were to occur in a portion of parcel 53 containing wetlands and the wetland could not be avoided, dredging could be required. Potential riparian impacts would be similar to those described for mineral exploration.

3.21.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to wetlands and riparian areas due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.21.4 Cumulative Impacts) could result in impacts in the wetlands and riparian areas analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit wetlands and riparian areas in the short term because reclamation of BLM parcels 46–50 would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. However, future land uses after reclamation is complete could reintroduce the risk of alteration of long-term wetland hydrology, wetland habitat fragmentation, alteration of drainage patterns, removal of vegetation, and soil disturbance if these activities cause surface or subsurface disturbance.

3.21.4 Cumulative Impacts

Based on estimated reasonably foreseeable geothermal testing; residential development; proposed hydrogen, solar, oil and gas, and helium development; utility/transmission, and road construction project footprints listed in Table 3.1-3 (excluding actions already in operation or in effect), an estimated 3,806 acres of disturbance could result in wetland loss or changes to wetland quality within mapped potential WOTUS, whereas an estimated 1,387 acres of disturbance could result in alteration of drainage patterns, removal of vegetation, and soil disturbance in mapped riparian areas. As discussed in Section 3.21.3, reasonably foreseeable land actions that could occur after the land exchange could generate an additional 458 acres of wetland impacts and 50 acres of riparian impacts, resulting in increased sediment deposition, dust formation on vegetation, alteration of long-term wetland hydrology, and residual effects resulting from the fragmentation of wetland habitats, as well as a range of riparian habitat impacts, such as alteration of drainage patterns, removal of vegetation, and soil disturbance on BLM parcels 6, 8–13, 17, 23–26, 28–30, 33–44, 46–50, 53, 54, 38S, and 39S. For context, however, the combined disturbance associated with land exchange future actions and other reasonably foreseeable development could impact less than 0.1% of mapped potential WOTUS (4,840,474 acres) in the HUC 8 subbasins that overlap the wetlands and riparian analysis area. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Additionally, SITLA and BLM compliance with Section 401 and 404 of the CWA, Utah Code 73-3-29, and EO 11990 would further reduce potential impacts. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

3.22 Wild Horses and Burros

The Wild Free-Roaming Horse and Burro Act of 1971 considers wild horses and burros to be the living embodiment of the pioneer spirit of the west. The BLM is responsible for managing and protecting wild horse and burro populations on the public lands that they administer. Five herd

management areas (HMAs) are located partially or fully within the proposed exchange parcels. These five HMAs are hereafter collectively referred to as the *wild horse and burro analysis area*.

3.22.1 Affected Environment

3.22.1.1 Parcel-Specific Conditions

The BLM manages 19 wild horse and burro HMAs across the state of Utah. The five HMAs that make up the wild horse and burro analysis area are Canyonlands, Sinbad, Muddy Creek, Range Creek, and Frisco HMAs (Table 3.22-1) (BLM 2022b–e). Equalization parcels do not contain any HMAs.

Table 3.22-1. BLM and SITLA Parcels in Wild Horse and Burro Herd Management Areas

HMAs	Total Acres	BLM-Administered Acres	Other Landowners	Appropriate Management Level (number of horses/burros)	Parcels
Canyonlands	89,400	77,300	State of Utah, NPS	60–100 burros	SE158A and B, SE160A and B
Sinbad	99,200	89,500	Federal, state, private	50–70 burros	SE178, SE179, SE192, SE193, SE195, SE196, SE197, SE198, SE199, SE200, SE212, SE213A, SE213B, SE215, SE216A, SE216B, SE216C, SE217, SE218, SE236, SE240, SE241
Muddy Creek	283,474	252,086	Federal, State, private	75–125 horses	SE203A and B, SE220, SE221, SE222, SE223, SE224A, SE224B, SE225, SE226, SE227, SE229, SE230, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE256, SE257, SE262, SE263, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE274, SE281, SE282
Range Creek	55,000	43,200	Federal, state, private	75–125 horses	21
Frisco	60,400	48,700	Federal, state, private	30–60 horses	42

3.22.1.2 Management Framework

The Wild Free-Roaming Horses and Burro Act of 1971 (Public Law 92-195), as amended in 1976, 1978, and 2022, was passed in order to protect wild horses and burros on public lands from capture, branding, harassment, or death. The PFO, CCFO, and FFO are responsible for the management of these wild horse and burro populations in the Canyonlands, Sinbad, Muddy Creek, Range Creek, and Frisco HMAs.

3.22.2 Proposed Action

3.22.2.1 Parcel-Specific Impacts

Under the land exchange, approximately 28,781 acres (66 parcels) of SITLA lands within the Canyonlands, Sinbad, and Muddy Creek HMAs would be conveyed to BLM (Table 3.22-2). Approximately 3,265 acres of BLM-administered lands within the Range Creek and Frisco HMAs would be conveyed to SITLA (parcels 21 and 42) (see Table 3.22-2). Overall, the land exchange would result in a net gain of BLM-administered lands within herd areas and HMAs, which would be a benefit to management of the species.

Two BLM-administered parcels within HMAs with potential changes in future land use would be conveyed to SITLA (parcels 21 and 42). An adjacent landowner has expressed interest in purchasing parcel 21 within the Range Creek HMA. Anticipated uses would be livestock grazing, hunting, and wildlife habitat, which are not expected to alter existing wild horse and burro use patterns or impede herd management activities within the Range Creek HMA unless additional fencing was installed. Parcel 42 within the Frisco HMA could be evaluated for potential mining activities in the future. Mining operations, if undertaken, could result in a loss of up to 2,905 acres of habitat and forage for horses due to removal of vegetation, soil disturbance, noise, and habitat fragmentation; however, this impact only represents 5% of the total acreage available within the HMA. Therefore, impacts to use patterns or herd management activities would be limited.

The transfer of SITLA parcels to the BLM would result in an increase in available forage and habitat on BLM lands for the wild horses and burros in the HMAs, which would help insure the long-term sustainability of these herds. Acquired parcels that intersect with these HMAs would be managed in accordance with the applicable RMPs. The increased acreage and continuity of BLM-administered lands within these HMAs would be beneficial to the BLM's ability to conduct herd management activities over a more cohesive and contiguous landscape. No AUMs would be adjusted for wild horses and burros management. Any appropriate management level adjustments due to acreage changes or overall fencing or water infrastructure layout (encumbrances) on the Canyonlands, Sinbad, Muddy Creek, Range Creek, and Frisco HMAs would be addressed after monitoring is completed to determine the permanent forage and water available on any acquired parcels.

Table 3.22-2. Reasonably Foreseeable Future Land Uses and Acreages by BLM and SITLA Parcel

Parcels	Reasonably Foreseeable Future Land Use	Affected HMA	BLM Acreage Transferred to SITLA	SITLA Acreage Transferred to BLM
SE158A and B, SE160A and B	Burro herd management.	Canyonlands	N/A	60
SE178, SE179, SE192, SE193, SE195, SE196, SE197, SE198, SE199, SE200, SE212, SE213A, SE213B, SE215, SE216A, SE216B, SE216C, SE217, SE218, SE236, SE240, SE241	Recreation and herd management, closed to mineral entry and grazing.	Sinbad	N/A	9,757

Parcels	Reasonably Foreseeable Future Land Use	Affected HMA	BLM Acreage Transferred to SITLA	SITLA Acreage Transferred to BLM
SE203A, SE203B, SE220, SE221, SE222, SE223, SE224A, SE224B, SE225, SE226, SE227, SE229, SE230, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE256, SE257, SE262, SE263, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE274, SE281, SE282	Recreation and herd management, closed to mineral entry and grazing.	Muddy Creek	N/A	18,964
21	Adjacent landowner has expressed interest in purchasing this parcel. Anticipated uses would be livestock grazing, hunting, and wildlife habitat.	Range Creek	360	N/A
42	Speculative potential for mineral exploration in a historic mining district.	Frisco	2,905	N/A
Total			**3,265**	**28,781**

3.22.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to wild horse and burro management due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.22.4 Cumulative Impacts) could result in impacts in the wild horse and burro analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would not affect wild horse and burro management because this resource does not occur on BLM parcels with coal leases.

3.22.4 Cumulative Impacts

Cumulative effects on wild horse and burro management could occur if overlapping reasonably foreseeable actions result in changes to use patterns or impede herd management activities; however, only one UDOT road project (within the Sinbad HMA) and one burro gather (within the Canyonlands HMA) in Table 3.1-3 are located within 1 mile of land exchange parcels. Details on the Interstate 70; MP 141.24 Joint to MP 147 project are not available but actions are likely to occur within or directly adjacent to the current road disturbance footprint with an estimated total footprint of 69 acres (<0.1% of the total HMA). The proposed gathering of burros within and adjacent to the Canyonlands HMA would consist of achieving and maintaining a herd

population within the appropriate management levels. Therefore, no appreciable adverse effects on wild horse and burro management are anticipated.

Reasonably foreseeable land actions that could occur after the land exchange could result in a loss of up to 2,905 acres of habitat and forage for horses within the Frisco HMA; however, this impact only represents 5% of total lands available within the HMA and would not overlap spatially with the UDOT and burro gather projects discussed above. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

3.23 Wildlife

A variety of laws, regulations, and guidance, including the ESA, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act, mandate that wildlife resources be protected and managed. The existence of healthy wildlife populations is also important to the public to fulfill ecologic, recreation, economic, and social values.

Due to the size of the land exchange, a wide range of wildlife species and habitat could be present. For this EA, all wildlife has been grouped into four categories: 1) non-designated species, including big game; 2) sensitive species, including state Species of Greatest Conservation Need (SGCN) and BLM sensitive species but excluding GRSG; 3) federally threatened, endangered, proposed, and candidate species; and 4) GRSG.

3.23.1 Affected Environment

3.23.1.1 Parcel-Specific Conditions

3.23.1.1.1 Non-designated Wildlife Species

Non-designated species include big, small, and upland game species and non-game (general) wildlife species. Big game species are managed both by the State of Utah (UDWR) and the BLM. UDWR manages big game populations, while BLM manages big game habitat.

The wildlife analysis area contains substantial, and crucial habitat for mule deer (*Odocoileus hemionus*), elk (*Cervus canadensis*), moose (*Alces alces*), pronghorn (*Antilocapra americana*), and bighorn sheep (*Ovis canadensis*), as well as migration corridors for mule deer (Table 3.23-1). In addition, the *wildlife analysis area* contains habitat for small game and game bird species and many general wildlife species. Acres of habitat reflect surface ownership only; no designated big game habitat exists in equalization parcels.

Table 3.23-1. Big Game Habitat Acreages within the Wildlife Analysis Area

Type of Habitat	Habitat on BLM Parcels	Habitat on SITLA Parcels
Pronghorn crucial habitat	21,363	30,719
Pronghorn substantial habitat	18,198	11,374
Rocky Mountain elk crucial habitat	16,719	3,788
Rocky Mountain elk substantial habitat	12,040	13,461
Mule deer crucial habitat	36,984	3,071
Mule deer substantial habitat	11,240	21,247
Mule deer migration	1,963	410
Desert bighorn sheep habitat	0	48,762

Type of Habitat	Habitat on BLM Parcels	Habitat on SITLA Parcels
Rocky Mountain bighorn sheep habitat	4,050	19,602

3.23.1.1.2 BLM and State Species of Greatest Conservation Need Species

The Utah SWAP (UDWR 2015) manages wildlife species, including Utah's SGCN to prevent the need for additional listings under the ESA. The BLM has no obligation to fulfill these management goals; however, 49 species on the SGCN list are also on the BLM sensitive species list. Thus, these species would be managed to reduce the likelihood and need to list them under the ESA in the future.

There are 46 BLM sensitive species that have potential to occur in the wildlife analysis area (BLM 2018b). Eight of the 46 species potentially occur only in the equalization parcels. Examples of BLM sensitive species potentially present on BLM and SITLA parcels include the following:

- Mammals: pygmy rabbit (*Brachylagus idahoensis*), white-tailed prairie dog (*Cynomys leucurus*), Preble's shrew (*Sorex preblei*), dark kangaroo mouse (*Microdipodops megacephalus*), and kit fox (*Vulpes macrotis*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), big free-tailed bat (*Nyctinomops macrotis*), and fringed myotis (*Myotis thysanodes*)
- Birds: bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*) and short-eared owl (*Asio flammeus*), ferruginous hawk (*Buteo regalis*), northern goshawk (*Accipiter gentilis*), grasshopper sparrow (*Ammodramus savannarum*), and long-billed curlew (*Numenius americanus*), American three-toed woodpecker (*Picoides dorsalis*) and Lewis's woodpecker *(Melanerpes lewis*), bobolink (*Dolichonyx oryzivorus*)
- Insects: monarch butterfly (*Danaus plexippus*), western bumblebee (*Bombus occidentalis*)
- Reptiles: Great Plains toad (*Anaxyrus cognatus*), and smooth greensnake (*Opheodrys vernalis*)

Parcels 1 and 4 are either adjacent to or within the Neponset Reservoir; islands in the reservoir support a breeding colony of American white pelican (*Pelecanus erythrorhynchos*). This colony has been slowly increasing over time, and with Great Salt Lake at historically low water levels and Gunnison Island now accessible by terrestrial predators, the Neponset colony site may be increasing in relative importance. Preliminary data suggest that pelican productivity at Neponset may have exceeded productivity at Gunnison Island for the last 3 years (BLM 2023c).

There are 66 Utah Species of Greatest Conservation Need (UDWR 2022) with potential to occur throughout the wildlife analysis area. Ten of the 66 species potentially occur only in the equalization parcels.

3.23.1.1.3 Migratory Birds

Many migratory birds are common throughout the wildlife analysis area, including 40 USFWS Birds of Conservation Concern (USFWS 2021a) and 30 Utah Partners in Flight Priority Species (Utah Partners in Flight 2002); 11 of these species are on both lists. Species lists for Birds of Conservation Concern and Priority Species are provided in Appendix G. The islands in Neponset

Reservoir also support breeding colonies of migratory bird species, including double-crested cormorants, snowy egrets, black-crowned night-herons, ring-billed gulls, California gulls (a bird of conservation concern), and Caspian terns. Parcels 1–5, 2S, 3S, and 5S are all entirely within the South Rich Bird Habitat Conservation Area (BHCA) and parcels 1, 2, 2S, 4, 5, and 5S are all within the Deseret Land and Livestock Ranch Important Bird Area (IBA) which is a globally important IBA.

3.23.1.1.4 Threatened, Endangered, Candidate, and Proposed Species

Table 3.23-2 describes federally threatened, endangered, and candidate species with potential to exist in the wildlife analysis area. A detailed summary by parcel is provided in Appendix E.

USFWS designated critical habitat for Mexican spotted owl is located within 13 SITLA parcels (parcels SE112–123, SE126), comprising a total of 6,267 acres. Additionally, USFWS designated critical habitat for desert tortoise (*Gopherus agassizii*) is located within the six equalization parcels, comprising a total of 2,031 acres.

Table 3.23-2. Federally Listed Wildlife Species within the Wildlife Analysis Area

Common Name	Scientific Name	Status	General Habitat and Range*
California condor	*Gymnogyps californianus*	Experimental, non-essential	Mountainous country at low and moderate elevations, especially rocky and brushy areas with cliffs available for nest sites, with foraging habitat encompassing grasslands, oak savannas, mountain plateaus, ridges, and canyons.
Canada lynx	*Lynx canadensis*	Threatened	Moist boreal forests that have cold, snowy winters and a high-density snowshoe hare (*Lepus americanus*) prey base. The predominant vegetation of boreal forest is conifer trees, primarily species of spruce and fir.
Desert Tortoise	*Gopherus agassizii*	Threatened	Mixed desert scrub associated with well drained sandy loam soils in plains, alluvial fans, and bajadas.
Mexican spotted owl	*Strix occidentalis lucida*	Threatened	Canyon habitats used by Mexican spotted owls (i.e., in Utah) typically include dendritic watersheds with myriad tributary canyons, a variety of vegetation communities (ranging from arid to mesic), and prominent vertical-walled or overhanging cliffs.
Monarch butterfly	*Danaus plexippus*	Candidate	In general, breeding areas are virtually all patches of milkweed in North America and some other regions. North American populations depend on overwintering habitats in California and Mexico.
North American wolverine	*Gulo gulo luscus*	Proposed threatened	Wolverines do not appear to specialize on specific vegetation or geographical habitat aspects, but instead select areas that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season. The requirement of cold, snowy conditions means that, in the southern portion of the species range (i.e., Utah) where ambient temperatures are warmest, wolverine distribution is restricted to high elevations
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered	Dense riparian habitats (cottonwood or willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings.

Common Name	Scientific Name	Status	General Habitat and Range*
Utah prairie dog	*Cynomys parvidens*	Threatened	Swale-type formations where moist herbaceous vegetation is available even during drought periods. Soil characteristics are an important factor in the location of Utah prairie dog colonies. Well-drained soils are a habitat requirement for Utah prairie dog burrows, and burrows must be deep enough (at least 3.3 feet) to protect the prairie dogs from predators and environmental and temperature extremes.
Western yellow-billed cuckoo	*Coccyzus americanus*	Threatened	Wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.

* As determined by USFWS 2022a (potential range) and BLM 2022h (elemental occurrences).

3.23.1.1.5 Greater Sage-Grouse

There are 32,507 acres of mapped GRSG Utah Priority Habitat Management Areas (PHMA) and 18,351 acres of GRSG Utah General Habitat Management Areas (GHMA) on BLM parcels, as mapped in the 2015 *Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, Including the Greater Sage-Grouse Sub-Regions of Idaho and Southwestern Montana, Nevada and Northeastern California, Oregon, Utah* (2015 Approved Resource Management Plan Amendment) (BLM 2015). The analysis area also contains 2,065 acres of mapped GRSG Utah PHMA and 1,362 acres of GRSG Utah GHMA on SITLA parcels (see Appendix G for mapset). Equalization parcels do not contain mapped GRSG habitat.

The wildlife analysis area contains one GRSG population area that has hit hard population triggers: Sheeprocks. A total of 13,502 acres of mapped PHMA occur within this population area within BLM parcels 35, 38, 39, 40, 35M, and 38S (BLM 2015). Occupied leks are mapped in BLM parcels 1, 5, and 39S (UDNR 2023).

3.23.1.2 Management Framework

3.23.1.2.1 Non-designated Wildlife Species

Management actions for big game species on BLM lands includes providing habitat, seasonal disturbance restrictions, cooperating with UDWR on reintroduction projects, habitat management plans, habitat surveys, inventory, monitoring and treatments, fence modifications, water allocation, and monitoring plans. Specific management actions can be referenced in the respective land use plans. All big game species and their habitats that overlap with SITLA lands are actively managed for sustainable populations by UDWR under their respective statewide management plans, and SITLA's protection and management of species would be dependent on State of Utah wildlife management codes and to the extent they align with the best interest of the trust beneficiaries.

3.23.1.2.2 BLM and State Species of Greatest Conservation Need

The BLM FO RMPs and MPFs establish management goals, objectives, and decisions for protecting sensitive wildlife species. BLM Manual 6840 (BLM 2008b) also establishes policy for management of BLM sensitive species that are found on BLM-administered lands. SITLA has no obligation to fulfill these BLM requirements for BLM sensitive species, but does seek input from

UDWR and works cooperatively to address wildlife management issues on SITLA lands to the extent they align with the best interest of the trust beneficiaries.

3.23.1.2.3 Migratory Birds

The Migratory Bird Treaty Act, as amended, made the taking, killing, or possessing of migratory birds unlawful. EO 13186 of 2001 clarified the responsibilities of federal agencies regarding migratory bird conservation and directed federal agencies to evaluate the effects of federal actions on migratory birds with an emphasis on species of concern. The EO also directed federal agencies to develop an MOU with the USFWS regarding their role with respect to the Migratory Bird Treaty Act. The 2010 MOU between the BLM and the USFWS is currently in effect and identifies specific activities that contribute to the conservation of migratory birds and their habitat (BLM and USFWS 2010).

3.23.1.2.4 Threatened, Endangered, and Candidate Species

The ESA (16 USC 1531 et seq.) establishes protections for fish, wildlife, and plants that are listed or proposed as threatened or endangered to avoid take of these species. Both the BLM and SITLA are required to adhere to all provisions within this law regarding wildlife. Additionally, the Dingell Act requires that "The Secretary shall exclude from any conveyance of a parcel of Federal land under paragraph (1) any Federal land that contains critical habitat designated for a species listed as an endangered species or a threatened species under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.). S. 47—102" and that "Any Federal land excluded under subparagraph (A) shall be the smallest area necessary to protect the applicable critical habitat."

3.23.1.2.5 Greater Sage-Grouse

The 2015 Approved Resource Management Plan Amendment (BLM 2015) guides land and resource management on BLM-administered surface and federal mineral estates within GRSG habitat management areas in the Great Basin Region. In priority habitat for GRSG, the management priority is to maintain and/or increase GRSG abundance and distribution, as well as manage activities that result in habitat loss and degradation to provide for a net conservation gain of GRSG habitat, not just minimize where impacts cannot be avoided. General habitat is defined as BLM-administered lands where some special management will apply to sustain GRSG populations in areas of occupied seasonal or year-round habitat outside of a PHMA.

The State of Utah manages GRSG under the *Utah Conservation Plan for Greater Sage-Grouse* (State of Utah 2019). To meet the objectives of GRSG conservation, the plan identifies strategies to address threats to GRSG populations. These strategies include the following:

- Identify the highest-priority GRSG habitats and migration corridors and protect at least 5,000 of those acres annually through conservation easements or other mechanisms.
- Improve and increase GRSG seasonal habitats by 75,000 acres each year, including riparian and mesic habitats.
- Monitor GRSG population trends annually and, if necessary, implement adaptive management responses to ensure that priority populations remain viable and stable.
- Coordinate with local, state, and federal firefighting jurisdictions to include GRSG habitats as a priority during pre-fire attack planning and suppression, second only to the protection of human life and property.

- Fund, support, and implement critical research that supports the implementation of the *Utah Conservation Plan for Greater Sage-Grouse* (State of Utah 2019).

3.23.2 Proposed Action

3.23.2.1.1 Non-designated Wildlife Species

Wildlife species and habitat present on 49 BLM parcels conveying surface rights (84,300 total acres) could be directly or indirectly impacted by potential future residential, livestock, energy, mining, recreational, water storage, or industrial development (see Table 3.1-1) or vegetation management. If these future land use actions are implemented, construction or vegetation management-related activities could result in varied impacts to non-designated wildlife, including the loss, degradation, and fragmentation of breeding, feeding, and sheltering habitats; collisions with or crushing by construction vehicles, equipment, or other overhead infrastructure; loss of nesting, roosting, or burrowing animals and their shelter in areas where vegetation removal, mining, or grading would occur; or increased invasive species establishment and spread.

In addition to potential habitat loss or alteration, future land use activities could lead to habitat fragmentation that alters individual movement and dispersal. Noise, light pollution, human activity, and vibration associated with construction or operation activities could also change how wildlife use these lands. Some individuals could choose to move away from these activities to adjacent lands, which could increase competition for resources on those lands with other individuals. Noise and vibration and other disturbances could also lead to increased stress on individuals, which could decrease an individual's health due to increased energy needed to sleep, eat, and perform other actions. Additionally, any consumptive use of water that results in reduced spring or surface flows could change the current hydrological regime, thus potentially altering vegetation community structure and area wildlife use.

The potential for reasonably foreseeable actions on BLM parcels to affect key terrestrial habitats that support wildlife species (as defined in the Utah Wildlife Action Plan [UDWR 2015]) is disclosed in Table 3.23-3.

Table 3.23-3. Terrestrial Key Habitats and Acreage by BLM Parcel

Terrestrial Key Habitat	BLM Parcels	Acres in BLM Parcels	Acres in Utah
Aspen-Conifer	1, 2, 3, 5, 15, 17, 23, 34, 36, 44	100	2,988,620
Desert Grassland	1, 2, 3, 5, 6, 8, 10, 12, 13, 23, 24, 25, 26, 27, 28, 30, 33, 34, 35, 36, 38, 39, 40, 41, 42, 47, 48, 53, 38S, 39S, 5S	52	331,185
Gambel Oak	6, 15, 17, 23, 24, 34, 36, 37, 38, 39, 42, 44, 46, 47, 48, 38S	163	2,042,775
Lowland Sagebrush	1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 23, 24, 25, 26, 27, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 53, 2S, 38S, 39S, 3S, 5S	35,846	11,695,319
Mojave Desert Shrub	9, 11, 40, 41, 42	50	482,009
Mountain Meadow	2, 17, 36, 42	3	74,419

Terrestrial Key Habitat	BLM Parcels	Acres in BLM Parcels	Acres in Utah
Mountain Sagebrush	1, 2, 3, 4, 5, 6, 15, 17, 26, 34, 35, 36, 37, 38, 39, 42, 43, 44, 46, 48, 2S, 3S, 5S	4,065	2,338,378
Mountain Shrub	1, 2, 3, 15, 17, 23, 26, 34, 36, 37, 38, 40, 43, 44, 46, 47, 48, 38S, 3S	333	1,436,147

Notes: Reported habitats and acreages are based on LANDFIRE data for consistency with the terrestrial key habitats condition assessment provided in the Utah SWAP. This table excludes BLM parcels where reasonably foreseeable land uses are unlikely to change from current activities or where BLM parcels only convey subsurface mineral rights.

As noted in Table 3.23-3, reasonably foreseeable land uses would occur predominantly in the lowland sagebrush key habitat category, which is one of the largest habitat types in Utah. Therefore, although reasonably foreseeable actions could result in site-specific or regional impacts (as discussed above), suitable key habitats for wildlife would continue to be available on a broad scale and provide cover, food, and other wildlife needs. Additionally, SITLA would manage species in compliance with State of Utah wildlife management codes and would seek input from UDWR and work cooperatively to address wildlife management issues on SITLA lands to the extent they align with the best interest of the trust beneficiaries.

Future land uses on all SITLA and equalization parcels (if needed for value equalization purposes) would be managed for natural and cultural resources protection and be available for recreation use or continuation of existing encumbrances as established in the Dingell Act. Additionally, conveyance of SITLA and equalization parcels to the BLM could provide a benefit to wildlife species and habitat by creating a more contiguous ecosystem for wildlife management and implementing BLM's management direction for species, as established in BLM RMPs and other relevant guidance. Therefore, reasonably foreseeable actions on SITLA and equalization parcels after conveyance (see Table 3.1-2) would not adversely affect wildlife resources.

3.23.2.1.2 BLM and State Species of Greatest Conservation Need

Potential land exchange impacts to sensitive wildlife species and habitat present on BLM parcels would be as described for non-designated species in Section 3.23.3.1.1; however, these impacts could have more intensified effects on sensitive species (than to non-designated species) due to the reduced viability of sensitive species. Although SITLA has no obligation to fulfill BLM sensitive species management requirements, the agency would seek input from UDWR and work cooperatively to address wildlife management issues on SITLA lands to the extent they align with the best interest of the trust beneficiaries.

Likewise, future land uses on all SITLA parcels are not anticipated to measurably alter existing sensitive species habitat or wildlife populations. Conveyance of SITLA parcels to the BLM could provide a benefit to sensitive wildlife species and habitat by creating a more contiguous ecosystem for wildlife management and added protection for BLM sensitive species as compared to their current management on SITLA lands, due to implementation of BLM management guidance established in BLM RMPs, BLM Manual 6840, and other relevant guidance. The conveyance of the equalization parcels (if needed for value equalization purposes) would also add habitat into BLM's management for sensitive species, in particular habitat for the federally threatened Mojave desert tortoise.

3.23.2.1.3 Migratory Birds

Table 3.23-4 discloses Utah Partners in Flight priority bird habitats (as defined in the Utah Partners in Flight Avian Conservation Strategy [UDWR 2002]) that could be directly or indirectly impacted by potential future residential, livestock, energy, mining, recreational, water storage, or industrial development (see Table 3.1-1) or vegetation management on BLM parcels, once conveyed to SITLA.

Table 3.23-4. Utah Partners in Flight Priority Bird Habitats and Acreage by BLM Parcel

Priority Bird Habitat	BLM Parcels	Acres in BLM Parcels	Acres in Utah
Riparian (Lowland and Mountain)	4, 15, 23–25, 36, 53	310	204,099
Wetland/Wet Meadow	1, 3, 5, 17, 5S	15	147,168
Shrubsteppe and High Desert Scrub	1–6, 8–13, 15, 17, 23–30, 33–44, 46–50, 53, 54, 2S, 3S, 5S, 38S, 39S	53,661	8,001,987
Pinyon-Juniper	1–9, 11, 12, 23–27, 34–44, 46–48, 50, 53, 3S, 5S, 38S, 39S	20,314	10,526,175

Note: This table uses SWReGAP data, which may not match NWI or LANDFIRE vegetation acreage reported in other sections. This table excludes BLM parcels where reasonably foreseeable land uses are unlikely to change from current activities or where BLM parcels only convey subsurface mineral rights.

Potential land exchange impacts to migratory birds present on BLM parcels due to reasonably foreseeable actions would be as described for non-designated species in Section 3.23.3.1.1. In particular, loss, fragmentation, or degradation of habitat represent key risk factors for many migratory bird species. Although reasonably foreseeable actions could result in site-specific or regional impacts, as noted in Table 3.23-4, suitable habitat for migratory birds would continue to be available on a broad-scale and provide cover, food, and other wildlife needs. The BLM has an MOU with the USFWS that details how BLM will implement the MBTA, including the conservation of migratory bird habitat; SITLA is not subject to this MOU. Therefore, conveyance of SITLA parcels to the BLM could provide a benefit to migratory bird species and their habitat by creating a more contiguous ecosystem for wildlife management and promoting habitat conservation.

3.23.2.1.4 Threatened, Endangered, Proposed, and Candidate Species

Listed, proposed, and candidate wildlife species whose ranges overlap BLM parcels and that could be directly or indirectly impacted by potential future vegetation management, residential, energy, recreational, water storage, or industrial development are provided in Table 3.23-5. For all other BLM parcels, reasonably foreseeable future land uses are anticipated to continue to consist of livestock grazing, ROWs, commercial guided hunting, and dispersed recreation activities (see Table 3.1-1). Any temporary, localized wildlife species or habitat impacts associated with these actions would occur regardless of the land exchange because these actions already occur on the landscape. No critical habitat would be conveyed to SITLA as part of the land exchange.

Table 3.23-5. Listed and Candidate Wildlife Species for BLM Parcels with Potential for Impact Due to Future Land Use Actions

Species	Scientific Name	Acreage within Species' Current Range	Parcels
California condor	*Gymnogyps californianus*	653	13, 33
Mexican spotted owl	*Strix occidentalis lucida*	6,312	23–26, 46–48, 53, 54
Southwestern willow flycatcher	*Empidonax traillii extimus*	2,963	23–29, 47, 48, 50
Western yellow-billed cuckoo	*Coccyzus americanus*	66,477	6, 8–13, 15, 17, 23–30, 33–44, 46–50, 53, 54, 38S, 39S
Monarch butterfly	*Danaus plexippus*	83,402	1–5; 2S; 3S; 5S; 6, 8–13, 15, 17, 23–30, 33–44, 46–50, 53, 54, 38S, 39S
Canada lynx	*Lynx canadensis*	356	15, 17
North American wolverine	*Gulo gulo luscus*	16,957	1–5; 2S; 3S; 5S

Note: Table excludes parcels only conveying subsurface mineral rights or where no change in future land use is anticipated. Acreage likely overestimates extent of potential impact, because suitable habitat may not be present on all lands that fall within a species' range. USFWS's Information for Planning and Consultation (IPaC) reports did not identify the North American wolverine as a species of concern based on known or expected range (USFWS 2022a); however, a very small number of sightings have occurred in Utah over the past 40 years.

Future general land use effects would be as described for non-designated species in Section 3.23.3.1.1. Specific development impacts that could occur after the land exchange would depend on the locations of projects relative to species' populations, but a general discussion of potential impacts associated with types of reasonably foreseeable actions is provided in Table 3.32-6.

Table 3.23-6. Reasonably Foreseeable Future Land Uses and Impacts by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Species	Impacts
6	Residential development	Western yellow-billed cuckoo, Monarch butterfly	Possible impacts to these species due to residential development include loss and degradation of habitat (USFWS 2020a). Reduction of milkweed/nectar source availability, in particular, through landscape conversion to developed use or pesticide application represents a significant threat to the monarch butterfly. Similarly, any development activities that result in reductions to yellow-billed cuckoo habitat via altered water quality or hydrology and increased sedimentation of riparian habitat could also adversely affect this species (USFWS 2020b).
8–13, 23– 25	Solar energy development	California condor, Mexican spotted owl, Southwestern willow flycatcher, western yellow-billed cuckoo	Utility-scale solar energy development could result in habitat destruction or modification, if suitable habitat for these species is present where ground-disturbing activities occur. Indirect impacts could also result from surface water and sediment runoff from disturbed areas, noise and human activity–related disturbance, introduction and spread of invasive and non-native species, lighting, or accidental spills (USFWS 2013a, 2014). For the California condor, retention of adequate carrion could become more difficult as natural landscapes are developed. Transmission line infrastructure associated with solar development also represents a collision and electrocution risk (USFWS 2013b).
17, 26	Recreational development	Mexican spotted owl, southwestern willow flycatcher, western yellow-billed cuckoo, Canada lynx	Possible impacts to these species due to project construction and operations include reduction, fragmentation, or degradation of suitable habitat, if present; increased risk of fire; establishment of exotic plant species; increased potential for predators and scavengers due to food scraps and garbage; and noise disturbance. Recreational uses within riparian areas could also cause compaction and result in changes in hydrology that could adversely affect species (USFWS 2014). Impacts to Canada lynx, if present, are anticipated to be related to habitat fragmentation or mortality associated with new roads and other recreation infrastructure (USFWS 2017). However, for BLM parcel 17, the BLM made a determination of no effect for lynx and western yellow-billed cuckoo due to lack of suitable habitat, lack of observations (for lynx), and the presence of existing disturbances (BLM 2022i)
28–30	Industrial development	Southwestern willow flycatcher, western yellow-billed cuckoo	Surface water diversions and groundwater pumping for industrial uses could result in loss of riparian habitat capable of supporting these species, as well as increase the risk of fire (USFWS 2014).

Parcels	Reasonably Foreseeable Future Land Use	Species	Impacts
34–44, 54, 38S, 39S	Mineral exploration	Western yellow-billed cuckoo, monarch butterfly	The western yellow-billed cuckoo is threatened primarily by habitat loss and modification. Mineral and other energy development could result in the loss of suitable habitat, if present, due to changes to water quality and quantity, soil erosion, streambank degradation from sedimentation, spills (gas, oil, lubricants, drilling fluids), and hydrological flow changes. Possible impacts to monarch butterflies include loss and degradation of habitat (USFWS 2020a). Reduction of milkweed/nectar source availability, in particular, through landscape conversion to developed use represents a significant threat to monarch butterflies.
46–50	Underground coal mining operations	Mexican spotted owl, southwestern willow flycatcher, western yellow-billed cuckoo, monarch butterfly	Mining-related reductions in water flow and groundwater, interruptions in natural hydrological events and cycles, physical modifications to streams, direct removal of riparian vegetation, and an increase in fire events could adversely affect these species (USFWS 2014). See mineral exploration, above, for impacts to monarch butterflies.
53-54	Lease potential for oil and gas or helium	Mexican spotted owl, western yellow-billed cuckoo, monarch butterfly	New road construction, utility corridors, pipelines, well pads, and infrastructure could adversely affect these species via habitat fragmentation, habitat loss, and spread of noxious and non-native plants. See mineral exploration, above, for impacts to monarch butterflies.

Note: Table excludes parcels only conveying subsurface mineral rights or where no change in future land use is anticipated. Species listed in table by parcel reflect species range, not suitable habitat. Therefore, the table likely overestimates extent of potential impact, because suitable habitat may not be present on all lands that fall within a species' range.

SITLA would be required to comply with the Endangered Species Act (ESA) under Sections 9 and 10. Any future land use on land disposed to private ownership would also need to comply with the same Sections of the ESA. As a result, the land exchange *may affect, but is not be likely to adversely affect* fish and wildlife species (California condor, North American wolverine, Mexican spotted owl, yellow-billed cuckoo, monarch butterfly, Canada lynx, and Utah prairie dog) with potential to occur on BLM parcelsAdditional details regarding the BLM's ESA consultation with the USFWS for the land exchange is provided Chapter 4 of the EA.

SITLA would convey critical habitat for bonytail, Colorado pikeminnow, desert tortoise, humpback chub, Mexican spotted owl, and razorback sucker to the BLM (Table 3.23-6). However, all of the SITLA parcels and equalization parcels (if needed for value equalization purposes) to be conveyed to the BLM would be managed for natural and cultural resources protection and be available for recreation use or continuation of existing encumbrances as established in the Dingell Act.

Table 3.23-7. Critical Habitat within the Wildlife Analysis Area

Common Name	Scientific Name	Status	Affected Parcels	Acres Affected
Bonytail	*Gila elegans*	Final	SE149	<1
Colorado pikeminnow	*Ptychocheilus lucius*	Final	SE149, SE150A, SE150B	1
Desert tortoise	*Gopherus agassizii*	Final	3C–E, 7A–C	2,031
Humpback chub	*Gila cypha*	Final	SE149	<1
Mexican spotted owl	*Strix occidentalis lucida*	Final	SE112–SE123, SE126	**7,373**
Razorback sucker	*Xyrauchen texanus*	Final	SE149, SE150A, SE150B	1

The BLM would comply with Section 7 of the ESA. Given this, the land exchange *may affect, but is not likely to adversely affect* wildlife species on SITLA and equalization parcels because species protections would remain the same or potentially increase through the establishment of a more contiguous ecosystem for wildlife management and increased management oversight for species, as established in BLM RMPs and other relevant guidance.

3.23.2.1.5 Greater Sage-Grouse

General impacts to GRSG habitat would be as described for non-designated species in Section 3.23.3.1.1 and could include reductions in the occurrence, acreage, or quality of GRSG habitat depending on the nature, type, and location of future developments. Under the land exchange, a total of approximately 32,507 acres of mapped GRSG Utah PHMA and 18,351 acres of GRSG Utah GHMA would be transferred to SITLA (see mapset in Appendix G). A total of approximately 2,065 acres of mapped GRSG Utah PHMA and 1,362 acres of GRSG Utah GHMA would be transferred to the BLM. Of this total, mapped GRSG general and priority habitat present on 23 BLM parcels conveying surface rights to SITLA (50,858 total acres) could potentially be directly or indirectly impacted by potential future residential, livestock, energy, recreational, water storage, vegetation management, or industrial development (see Table 3.1-1); however, all GRSG habitat transferred from the BLM to SITLA that falls within the state of Utah's Sage-Grouse Management Area boundaries would be managed under Utah state laws and guidelines. Although federal protections could decrease, conservation measures established in the *Utah Conservation Plan for Greater Sage-Grouse* would be employed. However, as the State's plan does not provide as stringent requirements for GRSG conservation, the land

exchange could result in greater impacts to GRSG species and habitat after conveyance to SITLA.

Any GRSG habitat transferred to the BLM would remain protected under federal laws, BLM RMPs, and other relevant policies. This conveyance could provide a beneficial impact by increasing oversight and consolidating GRSG management under the BLM. Therefore, reasonably foreseeable actions on SITLA or equalization parcels after conveyance (see Table 3.1-2) would not adversely affect GRSG species or habitat.

3.23.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to wildlife due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.23.4 Cumulative Impacts) could result in impacts in the wildlife analysis area. Additionally, under the No Action, there would be no benefit to wildlife species and habitat associated with the addition of habitat into BLM management. This would result in a lost opportunity for more contiguous ecosystem for wildlife management and increased management oversight for species, including the federally threatened Mojave desert tortoise, as established in BLM RMPs and other relevant guidance.

The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit wildlife resources in the short term because reclamation of BLM parcels 46–50 and 46C would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. However, future land uses after reclamation is complete could potentially reintroduce a risk to individual wildlife species and habitat if these activities increase habitat fragmentation, alteration, or degradation, or human disturbance.

3.23.4 Cumulative Impacts

Based on estimated reasonably foreseeable residential development; hydrogen, geothermal, solar, oil and gas, and helium generation; and pipeline, transmission/substation, telecommunication, recreation, and road construction project footprints listed in Table 3.1-3, up to an estimated 232,405 acres of landscape disturbance (excluding actions already in operation or in effect) could have a temporary to long-term adverse impact to individual wildlife species and habitat due to changes in noise and human activity, traffic, vegetation alteration, habitat removal, and water quality. Of this total, however, only an estimated 13,480 acres (6%) of future disturbance would directly overlap or intersect land exchange parcels. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

Ranges of the following listed species would overlap the above reasonably foreseeable projects: Canada lynx (78 acres), California condor (3,752 acres), Mexican spotted owl (31,892 acres), southwestern willow flycatcher (18,529 acres), and western yellow-billed cuckoo and monarch butterfly (231,092 acres). However, not all of these acreages would directly overlap or intersect reasonably foreseeable project footprints, and these acreages likely overestimate the extent of potential impact because suitable habitat may not be present on all lands that fall within a species' range.

The reasonably foreseeable project footprints noted above also contain 1,566 acres of mapped PHMA and 4,975 acres of mapped GHMA. Additionally, five current wind or solar farms and transmission lines in the wildlife analysis area represent a collision risk to certain bird and bat species; these risks would persist for the duration of project lifespans, although operators would likely implement monitoring and BMPs to reduce bird and bat impacts.

As discussed in Section 3.23.3, reasonably foreseeable land actions that could occur after the land exchange could generate up to an additional 84,300 acres of disturbance, resulting in habitat loss, habitat fragmentation, habitat degradation, water depletions, and individual wildlife species disturbance or displacement (due to collision, noise, etc.) in the vicinity of parcels 1–5, 2S, 3S, 5S, 6, 8–13, 15, 17, 23–30, 33–44, 46–50, 53, 54, 38S, and 39S. Reductions in the occurrence, acreage, or quality of GRSG habitat could also occur on approximately 50,858 acres, whereas future actions could affect up to 83,402 acres of land within the range of specific listed, proposed, and candidate wildlife species, although suitable habitat may not be present on all lands (see Table 3.23-5). Although reasonably foreseeable actions could result in site-specific or regional impacts, as a whole, the combined disturbance associated with land exchange future actions and other reasonably foreseeable development represents less than 1% of habitat (97,095,756 acres) present in the five Level III ecoregions that overlap the wildlife analysis area.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Additionally, BLM compliance with regulatory protections and LUPs for migratory birds, sensitive species, and threatened, endangered, and candidate species would further reduce potential impacts. SITLA would manage species in compliance with State of Utah wildlife management codes. Although SITLA is not subject to compliance with BLM sensitive species management requirements, BLM's MOU for implementation of the MBTA, or conservation measures in BLM's 2015 Approved Resource Management Plan Amendment for sage-grouse, SITLA would seek input from UDWR and work cooperatively to address wildlife management issues on SITLA lands to the extent they align with the best interest of the trust beneficiaries. Pursuant to the terms of Utah Executive Order EO/2015/002, SITLA is obligated to operate under the *Utah Conservation Plan for Greater Sage-Grouse* and would implement conservation strategies for conveyed parcels that fall within the plan.

Conveyance of SITLA and equalization parcels to the BLM could provide a benefit to wildlife species and habitat by creating a more contiguous ecosystem for wildlife management and implementation of BLM's management direction for species, as established in BLM RMPs and other relevant guidance. The conveyance of the equalization parcels (if needed for value equalization purposes) would also add habitat into BLM's management for sensitive species, in particular habitat for the federally threatened Mojave desert tortoise. SITLA and the BLM would be required to consult with the USFWS on future land use actions to comply with the ESA, which establishes protections for wildlife species that are listed as threatened, candidate, proposed, or candidate to avoid take of these species.

Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

3.24 Woodlands and Forests

The term woodland is typically associated with forest types located in drier climate regions (e.g., the pinyon-juniper woodlands) (BLM 2022f). The term forest is often used to describe any

landscape with trees but is more commonly associated with regions that receive adequate precipitation to support dense stands of trees (e.g., mixed conifer forest) (BLM 2022f).

3.24.1 Affected Environment

3.24.1.1 Parcel-Specific Conditions

Woodlands and forests provide ecosystem services such as fish and wildlife habitat, clean water, nutrient cycling, and carbon storage. In addition, they provide opportunities for recreation and harvest of forest products (e.g., timber, fuel, fence posts, Christmas trees, medicinal plants, and nuts). Table 3.24-1 displays mapped woodland and forest cover within the *woodland and forest analysis area* based on LANDFIRE EVT data (LANDFIRE 2022).

Table 3.24-1. Parcels with Mapped Forest Cover

Woodland and Forest Types	Acreage BLM Parcels	Acreage SITLA Parcels	Acreage Equalization Parcels
Great Basin Pinyon-Juniper Woodland	11,426	0	10
Colorado Plateau Pinyon-Juniper Woodland	4,556	11,603	0
Rocky Mountain Foothill Limber Pine-Juniper Woodland	1,102	<1	0
Inter-Mountain Basins Curl-Leaf Mountain Mahogany Woodland	150	2	0
Rocky Mountain Bigtooth Maple Ravine Woodland	134	0	0
Southern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest and Woodland	119	959	0
Rocky Mountain Aspen Forest and Woodland	99	3	0
Rocky Mountain Lower Montane-Foothill Riparian Woodland	45	10	0
Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland	12	554	0
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	9	1	0
Southern Rocky Mountain Ponderosa Pine Woodland	8	19	0
Inter-Mountain Basins Aspen-Mixed Conifer Forest and Woodland	8	0	0
Western Cool Temperate Urban Evergreen Forest	7	2	0
Great Basin Foothill and Lower Montane Riparian Woodland	2	0	0
Interior West Ruderal Riparian Forest	1	7	0
Western Cool Temperate Developed Evergreen Forest	<1	5	0
Western Cool Temperate Urban Deciduous Forest	<1	0	0
Inter-Mountain Basins Subalpine Limber-Bristlecone Pine Woodland	<1	<1	0

Woodland and Forest Types	Acreage BLM Parcels	Acreage SITLA Parcels	Acreage Equalization Parcels
Rocky Mountain Subalpine Mesic-Wet Spruce-Fir Forest and Woodland	<1	0	0
Western Warm Temperate Urban Deciduous Forest	0	0	1
Western Warm Temperate Urban Mixed Forest	0	0	<1
Total	**17,678**	**13,166**	**11**

Note: Table excludes parcels only conveying subsurface mineral rights. One parcel could contain multiple woodland types.

3.24.1.2 Management Framework

3.24.1.2.1 BLM Parcels

The overarching management framework for the BLM is multiple-use and sustained yield, as established in the FLPMA, with additional guidance provided in Forest Management Handbooks (5000 Series) and IM UT 2009-028, Procedures for Permitting the Sale of Special Forest Products, Forest Product Special Stipulations and Minimum Price List (BLM 2009b). At the FO level, woodlands and forest management is directed by the following RMPs and MFPs within the woodlands and forest analysis area:

- Cedar Beaver Garfield Antimony Record of Decision/RMP (BLM 1986c) (parcels in Beaver County)
- House Range Resource Area RMP and Record of Decision (BLM 1987) (parcels in Juab County)
- KFO Record of Decision and Approved RMP (BLM 2008c) (parcels in Kane County)
- MFO Record of Decision and Approved RMP (BLM 2008d) (parcels in San Juan County)
- PFO Record of Decision and Approved RMP (BLM 2008e) (parcels in Emery and Carbon counties)
- VFO Record of Decision and Approved RMP (BLM 2008f) (parcels in Uintah County)
- RFO Record of Decision and Approved RMP (BLM 2008g) (parcels in Sevier and Wayne County)
- Record of Decision for the Pony Express RMP and Rangeland Program Summary for Utah County (BLM 1990) (parcels in Utah and Tooele Counties)
- Randolph MFP (BLM 1980) (parcels in Rich County)
- Park City MFP (BLM 1975) (parcels in Wasatch and Summit Counties)

These RMPs and MFPs generally indicate that woodlands and forests are to be managed by the BLM to protect forest health while allowing for sustainable use harvest of woodland and forestry products where appropriate. The RMPs and MFPs typically allow for the harvest of fuel wood, posts, and Christmas trees by obtaining permits, with limits on where harvesting activities can occur (e.g., in designated mapped areas, outside of WSAs, outside of ACECs). Most of the

management plans allow for sustainable commercial harvesting and some allow for harvesting of pine nuts or biomass.

3.24.1.2.2 SITLA Parcels

The management framework for SITLA is outlined in Utah Code Title 53C, School and Institutional Trust Lands Management Act. SITLA was established to manage trust lands granted to the state by Congress at statehood and is required to generate revenue from those lands for beneficiaries such as schools. SITLA must manage "the lands and revenues generated from the lands in the most prudent and profitable manner possible, and not for any purpose inconsistent with the best interests of the trust beneficiaries" (Utah Code 53C-1-102(2)(b)).

SITLA offers two types of woodland and forest product sales: timber sales and small forest product sales. SITLA conducts timber sales to generate revenue and to improve long-term forest health through benefits such as the reduction of pine beetle devastation, the harvest of mature trees prone to disease, and the reduction of wildfire risk (SITLA 2023b). All SITLA timber harvests are conducted according to a timber harvest plan with management prescriptions indicating the number of trees to be removed. Roads, landings, and other disturbed areas are reclaimed and reseeded (SITLA 2023b). Each year, SITLA offers several timber sales through which local sawmills purchase timber to make various timber products. The most desired species for the sawmills are Douglas fir (*Pseudotsuga menziesii*), Engelmann spruce (*Picea engelmannii*), lodgepole pine (*Pinus contorta*), and aspen (*Populus tremuloides*) (SITLA 2023b).

Small forest product sales of limited quantities of firewood, poles, and fence posts occur over the counter at all trust land offices (SITLA 2023b). A permit and fee are required for the harvesting of these products. SITLA lands are classified as available for harvesting of all species, available for harvesting of limited species, temporarily closed for harvesting, or permanently closed for harvesting (SITLA 2021). Christmas tree cutting is not allowed at this time on SITLA lands.

3.24.2 Proposed Action

Under the land exchange, a total of approximately 17,678 acres of mapped woodland and forest cover would be present on parcels conveying surface rights to SITLA and a total of approximately 13,249 acres of mapped woodland and forest cover would be present on SITLA and equalization parcels (if needed for value equalization purposes) conveying surface rights to the BLM (see Table 3.24-1). Of this total, potential changes in future land uses on 41 BLM parcels (15,554 total acres of mapped forest cover) conveyed to SITLA could reduce woodland and forest product harvest opportunities (Table 3.24-2). Any future residential, energy (oil and gas or solar), recreational, mineral development, or coal mining that occurs on these parcels could directly remove forest cover or potentially preclude access for harvest of woodland and forest products, if implemented. Conversely, conveyance of BLM parcels 1–5, 2S, 3S, and 5S to SITLA for potential future acquisition by Deseret Land and Livestock could allow for commercial timber activity that is not currently permitted under the Randolph MFP. However, anticipated future land uses for these parcels do not currently include timber harvest.

For all other BLM parcels, reasonably foreseeable future land uses are anticipated to continue to consist of livestock grazing, commercial guided hunting, and dispersed recreation activities (see Table 3.1-1). These actions are not anticipated to result in removal of forest cover, and most existing harvest opportunities would not be affected because both BLM and SITLA allow for commercial and individual harvest; however, Christmas tree harvest would no longer be

permitted on lands transferred to SITLA. Additionally, SITLA does not have the multiple use mandate of the BLM and is not necessarily required to manage woodlands and forests in ways that equally protect resources such as wildlife, riparian areas, or scenic values. Therefore, under SITLA these types of resources could be less of a priority for management.

Table 3.24-2. Reasonably Foreseeable Future Land Uses and Acreages by BLM Parcel

Parcels	Reasonably Foreseeable Future Land Use	Mapped Forest Cover (acres)
1–5, 2S, 3S, and 5S	Livestock grazing and rangeland and commercial guided hunting	1,433
6, 15	Residential development	50
8–13, 23–25, 33	Solar energy development	5
17, 26	Recreational development	222
34–44, including 38S, 39S	Mineral exploration	12,143
46–50	Underground coal mining operations	3,133
53	Lease potential for oil and gas	1

Note: Table excludes parcels only conveying subsurface mineral rights or with no mapped forest cover. Parcels could contain multiple woodland types.

SITLA parcels[28] and equalization parcels (3D and 7A–7C) (if needed for value equalization purposes) with mapped forest cover (see Table 3.24-1) would be managed under the appropriate RMP or MFP. Future land uses on SITLA parcels and equalization parcels (if needed for value equalization purposes) would generally involve natural and cultural resources protection, recreation use, and continuation of existing encumbrances as established in the Dingell Act. Therefore, reasonably foreseeable actions on SITLA and equalization parcels after conveyance (see Table 3.1-2) would not adversely affect woodland and forest cover or product harvest opportunities, unless the parcels are located in areas prohibited from woodland and forest product harvest by respective RMPs or MFPs. In these cases, opportunities for woodland product harvest would be lost.

3.24.3 No Action

Under the No Action, the land exchange would not occur, and there would be no impacts to woodlands and forests due to reasonably foreseeable land actions that could occur after the land exchange. However, other reasonably foreseeable trends and actions (discussed in Section 3.24.4 Cumulative Impacts) could result in impacts in the woodlands and forests analysis area. The activities that currently occur on the parcels would be expected to continue under existing management and regulations, in accordance with the relevant laws, regulations, and guidance as described in the Management Framework section above, and any other applicable regulation, policy, or guidance. Continuation of the coal leasing moratorium would likely benefit woodlands and forests in the short term because reclamation of BLM parcels 46–50 would involve the restoration of topography, soils, vegetation, and water quality that may have been adversely impacted by mining activities. Future land uses after reclamation is complete could remove

[28] Consisting of the following: SE102–SE106, SE108, SE109, SE112–SE115, SE118–SE126, SE128–SE134, SE136–SE148, SE150A, SE151, SE153, SE154, SE156, SE162–SE172, SE174–SE177, SE180–SE183, SE186–SE192, SE194, SE195, SE197–SE209, SE211–SE215, SE217, SE218, SE220, SE222–SE231, SE234, SE236, SE237, SE239, SE241, SE243, SE247, SE248, SE255, SE256, SE258–SE260, SE262, SE265, SE268, SE269, SE274, SE275, SE282, SE287A.

woodland and forestry vegetation or increase opportunities for commercial timber harvest, depending on the activities that are implemented on the landscape.

3.24.4 Cumulative Impacts

Based on estimated reasonably foreseeable residential development; hydrogen, geothermal, solar, oil and gas, and helium generation; and pipeline, transmission/substation, telecommunication, recreation, and road construction project footprints listed in Table 3.1-3, an estimated 4,328 acres of disturbance (excluding actions already in operation or in effect) could remove or limit woodland and forestry harvest if development is incompatible with subsequent harvesting, as well as remove woodland and forestry vegetation (e.g., clearing a path for a transmission line). No future woodland or forest disturbance would directly overlap or intersect land exchange parcels, however. The cumulative effects of past and present actions in Table 3.1-3 are accounted for in the description of the affected environment.

As discussed in Section 3.24.3, an estimated 15,554 acres of reasonably foreseeable residential, recreational, and energy development that could occur after the land exchange could result in reduced woodland and forest product harvest opportunities within parcels 6, 8–13, 15, 17, 23–26, 33–44, 46–50, 53, 38S, and 39S (Table 3.24-2), while potentially increasing opportunities for commercial timber harvest on up to 1,433 acres in parcels 1–5, 2S, 3S, and 5S.

All other BLM parcels and all SITLA and equalization parcels (if needed for value equalization purposes) would continue to support reasonably foreseeable future land uses that already occur on the landscape. Therefore, when the land exchange is considered in combination with other present and reasonably foreseeable actions, no appreciable cumulative impacts would occur.

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 4.1-1.

Table 4.1-1. Consultation and Communication for the Environmental Assessment

Entity	Activity	Finding
USFWS	Coordination with federal agency.	The BLM prepared a biological assessment to analyze the impacts of the land exchange. To comply with the ESA and BLM Manual 6840 (BLM 2008b), the BLM formally consulted with the USFWS on this action. USFWS issued a Biological Opinion on 1/5/2024
Project mailing list	Coordination with interested public.	Outreach to the general public is described in Section 4.2.

Entity	Activity	Finding
Beaver County Commission, Bureau of Reclamation, Carbon County Commission, Colorado River Indian Tribes, Confederated Tribes of the Goshute Reservation, Eastern Shoshone Tribe, Emery County Commission, EPA, Grand County Commission, Hill Air Force Base, Hopi Tribe of Arizona, Iron County Commission, Jicarilla Apache Nation, Juab County Commission, Kaibab Band of Paiute Indians, Kane County Commission, Millard County Commission, Moapa Band of Paiute Indians, Natural Resources Conservation Service, Navajo Nation, Northwestern Band of the Shoshone Nation, Ohkay Owingeh, Paiute Indian Tribe of Utah, Public Lands Policy Coordinating Office, Pueblo of Picuris, Pueblo of Acoma, Pueblo of Cochiti, Pueblo of Isleta, Pueblo of Jemez, Pueblo of Laguna, Pueblo of Pojoaque, Pueblo of San Felipe, Pueblo of San Ildefonso, Pueblo of Sandia, Pueblo of Santa Clara, Pueblo of Tesuque, Zuni, Rich County Commission, San Juan County Commission, San Juan Southern Paiute Tribe of Arizona, Pueblo of Santa Ana, Sevier County Commission, Shoshone-Bannock Tribes, Skull Valley Band of Goshute Indians, School and Institutional Trust Lands Administration, Southern Ute Indian Tribe, Summit County Council, Te-Moak Tribe of Western Shoshone Indians, Tooele Army Depot, Tooele County Commission, Uintah County Commission, USACE Region 8, Forest Service, USFWS, Utah County Commission, Utah Test and Training Range, Ute Mountain Ute Tribe, Wasatch County Commission, Washington County Commission, Wayne County Commission, White Mesa Ute, Ysleta del Sur Pueblo, Pueblo of Zia Tribe	Invitation to participate as cooperating agency and to initiate consultation.	On September 2, 2022, the BLM issued invitations to participate as a cooperating agency on this EA and to initiate consultation.
Washington County Commission	Response to cooperating agency invitation.	On September 20, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.

Entity	Activity	Finding
Beaver County Commission	Response to cooperating agency invitation.	On September 28, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.
SITLA	Response to cooperating agency invitation.	On September 13, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.
Utah Public Lands Policy Coordinating Office	Response to cooperating agency invitation.	On September 28, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.
San Juan County Commission	Response to cooperating agency invitation.	On October 4, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.
Southern Ute Indian Tribe	Response to cooperating agency invitation.	On October 24, 2022, this entity accepted the invitation to consult per Section 106 of NHPA and requested additional information on the planned site for its impact to properties of religious and cultural importance to the Tribe.

Entity	Activity	Finding
Uintah County	Response to cooperating agency invitation.	On September 14, 2022, this entity accepted the invitation to participate as a cooperating agency. On May 11, 2023, the BLM issued an executed MOU that established a cooperating agency relationship between this entity and the BLM.
Utah SHPO	Coordination with state agency.	On February 23, 2023, the Utah SHPO concurred with the BLM's finding of "No Adverse Effect" for this undertaking, per application that all transferred historic properties will be now under the purview of Utah Code Annotated, 9-8-404 which the BLM and Utah SHPO recognize as having adequate and legally enforceable conditions and restrictions pursuant to 36 CFR 800.5(a)(2)(vii).

4.2 Summary of Public Participation

The NOEP (BLM 2021f) was mailed to interested parties beginning on November 18, 2021, initiating a 45-day public comment period. The NOEP was also published in respective county newspapers for a 4-week period per 43 CFR 2201.2 (beginning on November 18, 2021). The NOEP invited interested parties to submit comments concerning the exchange, including notification of any liens, encumbrances, or other claims relating to the lands. The BLM received a total of 13 letters; substantive comments received on the NOEP are summarized in Table 4.2-1. Substantive comments are defined in Section 6.9.2.1 of the BLM NEPA Handbook (BLM 2008h).

Letters containing information on the Dingell Act – Emery County Land Exchange were mailed on November 22, 2021, to potentially affected Tribes inviting the Tribes to comment and/or engage in government-to-government consultation on the land exchange. The Ysleta del Sur Pueblo replied that the Tribe does not have any comments, nor does it wish to consult on the land exchange. The Navajo Nation Heritage and Historic Preservation Department's Traditional Culture Program determined that there are no Navajo TCPs within the three proposed parcels for land exchange on Navajo Trust Lands, and that further consultation is not needed.

BLM issued a news release and posted it on the NEPA Register to initiate a 30-day public scoping period on July 13, 2022; a total of 10 letters were received by the closing date of August 12, 2022. Substantive comments received during the scoping period are summarized in Table 4.2-1.

Table 4.2-1. Summary of Notice of Exchange Proposal and Scoping Comments

Commenter	Organization	Comment Summary
Patrick McKay, Esq.	Vice President, Colorado Offroad Trail Defenders	Commenter expressed concern that BLM acquisition of a segment of the motorized Devil's Racetrack Trail located in parcel SE205 would be fully included in the Cold Wash Wilderness area with no cherry-stem for the road. This would result in the Devil's Racetrack trail being cut in half, with the middle of the trail where it crosses the former SITLA parcel being forced to be closed because it is inside a wilderness area. The commenter also requested that the BLM disclose how other instances of cherry-stemmed motorized routes either crossing or terminating in soon-to-be-acquired state land inside wilderness areas would be addressed.
Edward L. LaRue, Jr.; Richard Spotts	Desert Tortoise Council Ecosystems Advisory Committee Chairperson; Individual	Two commenters requested detailed descriptions and/or maps of proposed equalization parcels within the Red Cliffs NCA.
Richard Spotts; Carolyn Borg	Individual	Commenters requested evaluation of land exchange impacts to Mojave desert tortoise critical habitat and land exchange impacts to the Northern Corridor Highway ROW within equalization parcels.
Richard Spotts; Anonymous (3)	Individual	Several commenters stated that the NEPA analysis should fully disclose beneficial and adverse impacts associated with the land exchange to determine whether it is in the public's interest and achieves the objectives of the Dingell Act.
Redge B. Johnson	Executive Director, Office of the Governor Public Lands Policy Coordinating Office	Commenter provided information about big game wildlife habitats and GRSG within the exchange parcels.
David Mako	Vice President, Ensign Gold (US) Corp	Commenter requested additional information in the NEPA document on how mining claims would be transferred between the State and BLM.
Howard Morgan, Tim Green, Ed Davis, Dana Carter, Clint Eastwood; Brock Johansen	Goshen Cattle Growers Association Board of Directors; Johansen Ranch, LLC	Several commenters expressed concern that the land exchange would result in future loss of grazing permits and AUMs, and recreational access and opportunities, which could adversely affect the livelihoods of local residents. Comments requested clarification on the process for transfer of grazing rights and any change in permit costs.
Dickson S. Huntington	Huntington Ranch	Commenter noted that grazing permit No. 4304212 is incorrectly described as being within the Red Seeps grazing allotment. The permit is located in the Fuller Bottom allotment.
Redge B. Johnson	Executive Director, Office of the Governor Public Lands Policy Coordinating Office	Commenter provided information on source protection ordinances for proposed parcels.
Landon Newell	Staff Attorney, Southern Utah Wilderness Alliance	Commenter noted that the land exchange must comply with all relevant Biden administration directives and policies.

Commenter	Organization	Comment Summary
Landon Newell	Staff Attorney, Southern Utah Wilderness Alliance	Commenter stated that the BLM should 1) provide accurate baseline data, and 2) analyze and disclose the indirect impact of the land exchange, including but not limited to combustion of GHG emissions and impacts to air quality from mining, the impact of parcel exchanges adjacent to and near McCoy Flats to recreational opportunities in that area (e.g., mountain biking), the impact of parcel exchanges to extractive minerals exploration and development (e.g., coal, natural gas and oil, helium, gypsum, lithium), and the impact of parcel exchanges that are within WSAs and wilderness). The BLM must analyze and disclose the indirect effects of these (and other) foreseeable uses of the exchanged tracts of land, including to wildlife, cultural resources, air quality, water resources, and climate, among other resource values.
Landon Newell	Staff Attorney, Southern Utah Wilderness Alliance	Commenter stated that the BLM should analyze and disclose the cumulative impact of the land exchange, including cumulative impacts to climate change (from increased GHG emissions), water and riparian resources, wildlife, cultural, and LWCs, among other resource values.
Landon Newell	Staff Attorney, Southern Utah Wilderness Alliance	Commenter stated that the BLM should consult with the USFWS to identify listed species and/or critical habitats that may be affected by the land exchange, and to ensure that the Proposed Action does not jeopardize the continued existence of listed species or adversely modify critical habitat.
Landon Newell	Staff Attorney, Southern Utah Wilderness Alliance	Commenter noted that the NEPA document should disclose and analyze reasonably foreseeable future land uses for proposed parcels. More specifically, the commenter identified two projects with known future land uses: SITLA Proposed Special Use Lease Agreement 1967 and the Coyote Mine Project (ML-54257-OBA). The BLM reviewed these actions and determined they were outside all analysis areas for the land exchange.

The BLM issued a news release and posted it on the NEPA Register to initiate a 30-day public comment period on the Draft EA starting May 25, 2023; in all, 11 letters were received by the closing date of June 26, 2023. Comments received on the Draft EA and BLM responses are provided in Appendix H.

4.3 List of Preparers

Table 4.3-1 provides a list of preparers and reviewers for this EA.

Table 4.3-1. List of Preparers and Reviewers

Staff Member, Firm or Agency	Role
Tiera Arbogast, BLM	Planning and Environmental Specialist
Jamie Pool, BLM	Natural Resource Litigation Advisor

Staff Member, Firm or Agency	Role
Christina Price, BLM	Deputy State Director, Lands and Minerals
Teresa Burke, BLM	Lead Realty Specialist
Ray Kelsey, BLM	National Conservation Lands Program Lead
Aaron Roe, BLM	Utah State Botanist/T&E Program Lead
Erik Vernon, BLM	Air Resource Specialist
Matthew Fockler, BLM	Socioeconomic Specialist
Jared Dalebout, BLM	Hydrologist - Aquatics Program Lead
CCFO	
Erica Shotwell	Rangeland Management Specialist
Mitch Bayles	Rangeland Management Specialist
Derek Christensen	Wildlife Biologist
Dustin Schaible	Wildlife Biologist
Brooklynn Cox	Realty Specialist
Roy Plank	Archaeologist
Jeremy Cox	Engineering Equipment Specialist
Ed Ginouves	Mining Engineer
Jessica Bulloch	Range Technician
Colby Peterson	Forester
Chad Hunter	Wild Horse Specialist
FFO	
Fred Braun	Realty Specialist/Project Manager
R.B. Probert	Planner EJ and SE
Teresa Frampton	Recreation/ACEC
Burke Davenport	Farmland/Rangeland
Brian Taylor	Floodplains
Trevor Riding	Fuels
Stephanie Degraffenreid	Geology/Paleo
Logan Lefevre	Weeds
Jim Priest	Wildlife/Threatened And Endangered Animals
Kyle Monroe	Property Boundaries
David Whitaker	Threatened and Endangered Plants
Bryce Pulver	Water Resources/Rights
Eric Reid	Forestry/Woodlands/Wild horses
Cindy Ledbetter	Field Manager
KFO	
Lisa Church	Wildlife Biologist
Dan Gunn	ORP
John Reese	Range Mgmt. Spec.

Staff Member, Firm or Agency	Role
Brian Storm	Archaeologist
Jason Stewart	GIS Specialist
MFO	
Nate Huber	Air Quality/GHG
Katie Stevens	ACEC, Recreation
Bill Stevens	Natural Areas, EJ, LWC, Socioeconomics, WSR
Ami Schlosser	Cultural
Gabe Bissonette	Fisheries, Floodplains, Wetlands
Josh Relph	Fire/Fuels
Jennifer Whittington	Geology/Minerals, Paleo, Water Resources
Lisa Wilkolak	Lands/Access
Aaron Vollmer	Grazing, Rangeland Health Standards, Soils
Chris Marlor	Invasive Species
Pam Riddle	Vegetation, Wildlife
Jill Stephenson	Woodlands
PFO	
Adam Deppe	Physical Scientist (Air)
Jaydon Mead	Outdoor Recreation Planner
Natalie Fewings	Archaeologist
Jaydon Mead	Outdoor Recreation Planner
Molly Hocanson/Veronica Kratman	Planning and Environmental Specialist/Realty Specialist
Stephanie Bauer	Rangeland Management Specialist
Stuart Bedke	Range/Forestry Technician (Fire)
Rebecca Anderson	Geologist
Veronica Kratman	Realty Specialist
Blake Baker	Outdoor Recreation Planner
Stephanie Bauer	Rangeland Management Specialist
DaShell Burnham	Botanist
Doug Howard	Petroleum Engineer
Jerrad Goodell	Ecologist (Aquatics)
Mike Tweddell	Assistant Field Manager
Dakota Ray	Wildlife Biologist
RFO	
Mike Utley	Realty Specialist - Lands & Realty
Dustin Rooks	Botanist - Plants TES
Paul Caso	Range Management Specialist - Range
Devin Mclemore	Geologist - Mineral & Paleontology
Sam Marolt	Geologist - Mineral & Paleontology

Staff Member, Firm or Agency	Role
Graydon Bascom	Outdoor Recreation Planner - Recreation & Wilderness
Jacqueline Monsell	Archaeologist - Cultural Heritage
Sue Fivecoat	Assistant Field Office Manager
SLFO	
Todd Marks	Geology/mineral resources/energy production & paleontology
Michael Sheehan	Cultural resources & Native American religious concerns
Madeline Scheintaub	Fire/fuels management & woodland/forestry
Emily Boivin	Lands/access & property boundary evaluation
Brandon Neff	Livestock grazing/rangeland health, farmlands (prime/unique), soils, vegetation (excluding special status species), invasive species/noxious weeds, & threatened, endangered, candidate, or special status plant species
Nancy Williams	Migratory birds, threatened, endangered, candidate, or special status animal species (terrestrial), wildlife (terrestrial) excluding special status species & GRSG habitat
JuLee Pallette	National historic trails, recreation, travel/transportation, visual resources, WSRs, wilderness/WSA & lands with wilderness characteristics
Tami Howell	Wild horses
Pamela Schuller	NEPA compliance, air quality, GHGs, socioeconomics, environmental justice & wastes (hazardous or solid)
Stephanie Hebert	GRSG habitat
Mark Williams	Invasive Species/Noxious Weeds, Threatened, Endangered, Candidate, or Special Status Plant Species, woodland/forestry
Cassie Mellon	Threatened, Endangered, Candidate, or Special Status Animal Species (Aquatic), Wetlands/Riparian Zones & Floodplains
Alan Jones	Wastes (hazardous or solid)
Bryce Pulver	Water Resources/Quality (drinking/surface/ground), Water Rights
Tami Howell	Wild Horses and Burros
SGFO	
Amber VanAlfen	Archaeologist
Callie Goff	Planning and Environmental Coordinator
Ed Ginouves	Geologist
Jacob Frost-Perkins	Natural Resources
John Kellam	Biologist (NCA)
Katherin Cleek	Archaeologist (NCA)
Kyle Voyles	Rec Planner
Robert Wells	Rec Planner
Ryan Reese	Natural Resources
Shawnna Dao	Realty Specialist
Stephanie Taylor	Biologist

Staff Member, Firm or Agency	Role
Stephanie Trujillo	Realty Specialist
VFO	
Patrick Ahrnsbrak / Realty Specialist - Team Lead	Lands and Access, Environmental Justice, Farmlands, Socioeconomics, Wastes (Hazardous/Solid)
Adam Deppe / Physical Scientist (Air)	Air quality, GHGs
Jessica Farmer / Outdoor Recreation Planner	Special designation lands
Jaymee Hasty / Archaeologist	Cultural resources
Dixie Sadlier / Wildlife Biologist	Fuels and Fire
Garrett Manion / Geologist	Geology, Minerals, Energy Production, Paleontology, Water Groundwater Quality
Dusty Carpenter / NRS/Wild Horse and Burro	Range, livestock grazing, and wild horses
Sandra Robins / Botanist	Vegetation
Jerrad Goodell / Ecologist (Aquatics)	Water Resources, Riparian, Wetlands, Floodplains, Water Rights, Wildlife Fish Designated or Non-designated
David Palmer / Forester	Woodlands and Forestry
Cal Deberard / Wildlife Biologist	Wildlife
Brandon McDonald / NRS	Soils Physical / Biological
Consultant Team	
Sue Wilmot, SWCA Environmental Consultants (SWCA)	Consultant project manager
Donna Morey, SWCA	Assistant project manager; decision file and administrative record lead
Kelly Beck, SWCA	Cultural, Tribal, and Section 106 lead
Chad Ricklefs, SWCA	NEPA/lands and realty advisor
Georgia Knauss, SWCA	Paleontological resources during Draft EA preparation
Kevin Rauhe, SWCA	Visual resources
Tyler Andrews, DJ&A	Special-status species and wildlife (terrestrial and aquatic)
Brad Sohm, SWCA	Air quality and climate
Nate Jones, SWCA Emily Waters, SWCA	Riparian resources and wetlands, floodplains, water resources
Rachel Powers, DJ&A	Special designation lands and LWCs
Gretchen Semerad, SWCA	Forestry and woodlands
Kelsey O'Neil, DJ&A	Livestock grazing and rangelands; vegetation
Victoria Amato, SWCA Tim Clute, SWCA	Fire and fuels management
Matt Westover, SWCA Brooke Crockett, SWCA	Lands and realty; minerals and energy
Jeff Wakefield, SWCA	Socioeconomics and environmental justice
Bill Spain, SWCA	Recreation

Staff Member, Firm or Agency	Role
Hannah Kuhns, DJ&A	Vegetation
Jason Kainer, SWCA	GIS
Susan Munroe, SWCA	Technical editing

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Appendix A Parcel Legal Descriptions and Encumbrances

September 2023

Dingell Act - Emery County Land Exchange

BLM Lands to Acquired

Updated 06/14/2023

PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Surface Group Target Areas																		
Woodruff South																		
Parcel 1	Rich	7N	7E	4	SLB&M	Lots 1(40.94), 2(40.81), 3(40.69), 4(40.56), S2N2, S2 [ALL]	643.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 1	Rich	7N	7E	8	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 1	Rich	7N	7E	10	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-074055** (ROW Fiber Optic Facilities) All West Communications, Exp. 12/31/2025	N/A	**WR #23-1911** (Stockwatering) Flow Unevaluated; **WR #23-2562** (Stockwatering) Flow Unevaluated	N/A
Parcel 1	Rich	7N	7E	12	SLB&M	E2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-1906** (Stockwatering) Flow Unevaluated; **WR #23-2387** (Stockwatering) Flow Unevaluated	N/A
Parcel 1	Rich	7N	7E	14	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-074055** (ROW Fiber Optic Facilities) All West Communications, Exp. 12/31/2025	N/A	**WR #23-1899** (Stockwatering) Flow Unevaluated; **WR #23-1900** (Stockwatering) Flow Unevaluated	N/A
Parcel 1	Rich	7N	7E	20	SLB&M	E2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 1	Rich	7N	7E	22	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-2051** (Stockwatering) Flow Unevaluated; **WR #23-2053** (Stockwatering) Flow Unevaluated; **WR #23-2424** (Stockwatering) Flow Unevaluated	N/A
Parcel 1	Rich	7N	7E	24	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-1964** (Stockwatering) Flow Unevaluated; **WR #23-2385** (Stockwatering) Flow Unevaluated	N/A
Parcel 1	Rich	7N	7E	26	SLB&M	E2, E2W2	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 1	Rich	7N	7E	28	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-2403** (Stockwatering) Flow Unevaluated	N/A
Parcel 2	Rich	7N	8E	4	SLB&M	Lots 1(63.96), 2(38.87), 3(39.45), 4(40.04) [ALL]	182.32	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-054834** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2044; **UTU-075624** (ROW-Roads) Farmland Reserve Inc., Exp 12/31/2048	**UTU-075733** (Sand & Gravel Community Pit Permit) BLM, Perpetual - **INFORMATION ONLY**	N/A	N/A
Parcel 2S	Rich	7N	8E	5	SLB&M	Lots 1(66.80), 2(66.80), 3(66.80), 4(66.80), S2N2, S2 [ALL]	0.00	0.00	747.20	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 2	Rich	7N	8E	6	SLB&M	Lots 1(63.45), 2(56.75), 3(50.05), 4(43.75), 5(41.24), 6(42.07), 7(42.90), S2NE4, SE4NW4, E2SW4, SE4 [ALL]	700.25	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-000008** (ROW-Irrigation Facilty) Neponset Land & Livestock, Perpetual	N/A	**WR #23-1973** (Stockwatering) Flow Unevaluated	N/A
Parcel 2	Rich	7N	8E	8	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A

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PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Parcel 2	Rich	7N	8E	18	SLB&M	Lots 1(40.80), 2(40.40), 3(40.00), 4(39.60), E2, E2W2 [ALL]	640.80	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-1969** (Stockwatering) Flow Unevaluated	N/A
Parcel 2	Rich	7N	8E	20	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 2	Rich	7N	8E	28	SLB&M	Lots 1(40.34), 2(40.34), 3(40.34), 4(40.34) [ALL]	161.36	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-070321** (ROW-Power Transmission) Rocky DBA Rocky Mountain Power, Exp. 12/31/2024	N/A	**WR #23-2054** (Stockwatering) Flow Unevaluated	N/A
Parcel 2	Rich	7N	8E	30	SLB&M	Lots 1(38.10), 2(38.30), 3(38.50), 4(38.70), E2, E2W2 [ALL]	633.60	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 3	Rich	8N	6E	12	SLB&M	NE4NE4, SW4, NW4SE4	240.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-095869** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 3	Rich	8N	6E	14	SLB&M	Lots 1(40.08), 2(39.99), 3(39.90), 4(39.81), W2E2 [Lots aka E2E2]	319.78	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 3S	Rich	8N	6E	23	SLB&M	Lots 1(39.76), 2(39.77), W2NE4, SE4NW4 [Lots aka E2NE4]	0.00	0.00	199.53	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-095869** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 3	Rich	8N	6E	26	SLB&M	Lots 1(39.78), 2(39.78), 3(39.78), W2NE4, E2W2, NW4SE4 [Lots aka E2NE4, NE4SE4]	399.34	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-095869** (ROW-Roads) BLM, Pending	N/A	**WR #23-2009** (Stockwatering) Flow Unevaluated	N/A
Parcel 3	Rich	8N	6E	34	SLB&M	NE4NE4, NE4SW4, S2SW4, SE4	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-095869** (ROW-Roads) BLM, Pending	N/A	**WR #23-1977** (Stockwatering) Flow Unevaluated	N/A
Parcel 3S	Rich	8N	6E	34	SLB&M	SE4NE4	0.00	0.00	40.00	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-095869** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 4	Rich	8N	7E	26	SLB&M	NE4NE4, W2NE4, N2SE4NE4, W2, NW4SE4, N2SW4SE4	520.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 4	Rich	8N	7E	34	SLB&M	Lots 1(42.03), 2(42.08), 3(42.99), 4(42.80), 5(42.48), 6(42.66), 7(42.14), 8(42.10), 9(42.12), 10(42.09), 11(42.35), 12(42.32), 13(42.18), 14(42.22), 15(42.15), 16(42.18) [ALL]	676.89	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTSL-0633338** (ROW-Irrigation Facility) E Deseret Ltd, Perpetual	N/A	N/A	N/A
Parcel 5	Rich	8N	8E	6	SLB&M	Part of Lot 7 [South of HWY 16]	6.57	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-079398** (ROW-O&G Pipelines) Questar Pipeline Company, Exp. 12/31/2033	N/A	N/A	N/A

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Parcel 5S	Rich	8N	8E	7	SLB&M	ALL [South of HWY 16]	0.00	0.00	392.36	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-079398** (ROW-O&G Pipelines) Questar Pipeline Company, Exp. 12/31/2033	N/A	N/A	N/A
Parcel 5	Rich	8N	8E	8	SLB&M	SW4SW4 [South of HWY 16]	2.43	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-066636** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
Parcel 5S	Rich	8N	8E	17	SLB&M	ALL (South of HWY 16)	0.00	0.00	374.10	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-054834** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2044; **UTU-066636** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
Parcel 5	Rich	8N	8E	18	SLB&M	Lots 1(39.39), 2(39.76), 3(40.13), 4(40.51), E2, E2NW4, NE4SW4 [Lots aka W2W2]	599.79	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	**WR #23-2539** (Stockwatering) Flow Unevaluated; **WR #23-3583** (Stockwatering & Other) Flow 0.002 cfs or 8.4 acft	N/A
Parcel 5S	Rich	8N	8E	18	SLB&M	SE4SW4	0.00	0.00	40.00	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	N/A	N/A	N/A	N/A
Parcel 5S	Rich	8N	8E	19	SLB&M	Lots 1(40.73), 2(40.77), 3(40.84), 4(40.88), E2, E2W2 [ALL]	0.00	0.00	643.23	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-000008** (ROW-Irrigation Facility) Neponset Land & Livestock, Perpetual	N/A	N/A	N/A
Parcel 5	Rich	8N	8E	20	SLB&M	ALL [South of HWY 16]	665.65	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-000008** (ROW-Irrigation Facility) Neponset Land & Livestock, Perpetual; **UTU-047285** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2042; **UTU-82863** (ROW Communication Site) UDOT, Exp. 12/31/2037	N/A	**WR #23-1958** (Stockwatering) Flow Unevaluated; **WR #23-1959** (Stockwatering) Flow Unevaluated; **WR #23-2490** (Stockwatering) Flow Unevaluated; **WR #23-2491** (Stockwatering) Flow Unevaluated; **WR #23-2492** (Stockwatering) Flow Unevaluated	N/A
Parcel 5S	Rich	8N	8E	21	SLB&M	Lots 1-4 [South of HWY 16]	0.00	0.00	107.33	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-047285** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2042; **UTU-054834** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2044; **UTU-82863** (ROW Communication Site) UDOT, Exp. 12/31/2037	N/A	N/A	N/A
Parcel 5	Rich	8N	8E	28	SLB&M	Lots 1(38.06), 2(38.99) [aka W2NW4]	77.05	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	**UTU-000008** (ROW-Irrigation Facility) Neponset Land & Livestock, Perpetual; **UTU-054834** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2044	N/A	N/A	N/A
Parcel 5S	Rich	8N	8E	29	SLB&M	N2	0.00	0.00	320.00	0.00	0.00	Acquire Surface Only	Woodruff South	Surface	**UTU-000008** (ROW-Irrigation Facility) Neponset Land & Livestock, Perpetual	N/A	N/A	N/A

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Parcel 5	Rich	8N	8E	30	SLB&M	Lots 1(40.79), 2(40.51), 3(40.25), 4(39.97), E2, E2W2 [ALL]	641.52	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Woodruff South	Surface	N/A	N/A	N/A	N/A
TOTAL							**13,670.35**	**0.00**	**2,863.75**	**0.00**	**0.00**							
Lake Mountain North																		
Parcel 6	Utah	6S	1W	4	SLB&M	Lots 1(18.93), 2(22.49), 3(22.36), 4(22.23), 5(22.10) [Lots aka N2N2]	108.11	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Lake Mountain North	Surface	**UTU 95866** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
TOTAL							**108.11**	**0.00**	**0.00**	**0.00**	**0.00**							
Mona																		
Parcel 8	Juab	12S	1W	11	SLB&M	SE4NE4, S2	360.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Mona Solar	Surface	**UTU-036797** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2035; **UTU-045883** (ROW-Power Transmission) IPP Operating Agent, Exp. 06/11/2030; **UTU-082829** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2040; **UTU-087665** (ROW-Roads) Juab County, Pending; **UTU-092201** (ROW-Power Transmission) Transcanyon LLC, Pending; **UTU-0115794** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2041; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	**-WR #53-1204** (Stockwatering & Other) Flow Unevaluated. Pending Adjudication. Validity is in question; **WR #53-1222** (Stockwatering & Other) Flow Unevaluated. Pending Adjudication. Validity is in question.	N/A
Parcel 8	Juab	12S	1W	14	SLB&M	N2, SW4, W2SE4	560.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Mona Solar	Surface	**UTU-036797** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2035; **UTU-045883** (ROW-Power Transmission) IPP Operating Agent, Exp. 06/11/2030; **UTU-057760** (ROW-Roads) Juab County, Exp. 03/28/2026; **UTU-087665** (ROW-Roads) Juab County, Pending; **UTU-092201** (ROW-Power Transmission) Transcanyon LLC, Pending; **UTU-0115794** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2041; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	**WR #53-539** (Stockwatering & Other) Flow Unevaluated; **WR #53-1205** (Stockwatering & Other) Flow Unevaluated. Pending Adjudication. Validity is in question; **WR #53-1206** (Stockwatering & Other) 1.5 ELU. Pending Adjudication. Validity is in question; **WR #53-1207** (Stockwatering & Other) Flow Unevaluated. Pending Adjudication. Validity is in question; **WR #53-1213** (Stockwatering & Other) 31 ELUs. Pending Adjudication.	N/A
TOTAL							**920.00**	**0.00**	**0.00**	**0.00**	**0.00**							
Milford North																		
Parcel 9	Beaver	26S	10W	19	SLB&M	Lot 1(39.67), NW4NE4, NE4NW4 [Lot aka NW4NW4]	119.67	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-094837** (ROW-Power Transmission) Milford Solar Phase II LLC, Exp. 12/31/2050	N/A	N/A	N/A
Parcel 9	Beaver	26S	10W	30	SLB&M	Lot 4(40.11), E2SW4, W2SE4 [Lot aka SW4SW4]	200.11	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	N/A	N/A	N/A	N/A
Parcel 9	Beaver	26S	10W	31	SLB&M	W2NE4, NW4SE4	120.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	N/A	N/A	N/A	N/A
Parcel 10	Beaver	26S	11W	24	SLB&M	S2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-042519** (ROW-Power Transmission) IPP Operating Agent, Exp. 04/02/2030; **UTU-060642** (ROW-Power Transmission) Los Angeles City, Exp 04/02/2030; **UTU-089331** (ROW-Power Transmission) Zephyr Power Transmission LLC, Pending	N/A	N/A	N/A

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Parcel 11	Beaver	27S	10W	5	SLB&M	Lots 1(39.99), 2(39.97), S2NE4, SE4NW4, NE4SW4, S2SW4, SE4 [Lots aka N2NE4]	479.96	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-011725** (ROW-Roads) Fed HWY Admin, Perpetual; **UTU-059239** (ROW-Fiber Optic Facilities) WorldCom Network Services Inc, Exp 08/01/2036; **UTU-076357** (ROW-RR Spur & Access Road) Martin Marietta Materials, Exp 12/31/2047; **UTU-083067** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2042	N/A	N/A	N/A
Parcel 11	Beaver	27S	10W	6	SLB&M	Lot 7(40.49), SE4SW4 [Lot aka SW4SW4]	80.49	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-083067** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2042	N/A	N/A	N/A
Parcel 11	Beaver	27S	10W	8	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-011725** (ROW-Roads) Fed HWY Admin, Perpetual; **UTU-059239** (ROW-Fiber Optic Facilities) WorldCom Network Services Inc, Exp 08/01/2036	N/A	N/A	N/A
Parcel 11	Beaver	27S	10W	17	SLB&M	N2NW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	N/A	N/A	**WR #71-2219** (Stockwatering) Flow 1300 ELU	N/A
Parcel 12	Beaver	27S	11W	1	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Milford North Solar	Surface	**UTU-042519** (ROW-Power Transmission) IPP Operating Agent, Exp. 04/02/2030; **UTU-066642** (ROW-Power Transmission) Los Angeles City, Exp 04/02/2030; **UTU-083067** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2042; **UTU-089331** (ROW-Power Transmission) Zephyr Power Transmission LLC, Pending; **UTU-93352** (ROW-Power Transmission) Milford Solar I LLC, Exp 12/31/2048	N/A	N/A	**UMC-439822** (1 Claim) Tamra Mining Co LLC
TOTAL							**2,680.23**	**0.00**	**0.00**	**0.00**	**0.00**							
Beryl																		
Parcel 13	Iron	35S	15W	20	SLB&M	W2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Beryl Solar	Surface	**UTU-076565** (ROW-Fiber Optic Facility) Level 3 Communications, LLC, Exp 04/13/2028	N/A	N/A	N/A
TOTAL							**320.00**	**0.00**	**0.00**	**0.00**	**0.00**							
Silver Slope																		
Parcel 15	Summit	2S	4E	14	SLB&M	Part of Lot 26 [aka Part N2]	30.73	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Silver Slope	Surface	**UTU-061527** (Fed Aid HWY) Federal Highway Administration, Perpetual; **UTU-068297** (ROW-Roads) Hidden Hollow Association, Exp 12/31/2022; **UTU-089248** (ROW-Roads) Summit View Lot #2 LLC, Exp 12/31/2042; **UTU-91051** (ROW-Telephone & Telegraph, FLPMA) Intermountain Fiber Connect LLC, Exp 12/31/2044	N/A	N/A	N/A
Parcel 15	Wasatch	2S	4E	14	SLB&M	Part of Lot 26 [aka Part N2]	40.96	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Silver Slope	Surface	**UTU-061527** (Fed Aid HWY) Federal Highway Administration, Perpetual **UTU-91051** (ROW-Telephone & Telegraph, FLPMA) Intermountain Fiber Connect LLC, Exp 12/31/2044	N/A	N/A	N/A
TOTAL							**71.69**	**0.00**	**0.00**	**0.00**	**0.00**							
Jordanelle West																		
Parcel 17	Wasatch	2S	4E	34	SLB&M	Lot 25 [Part of SE4SE4SE4]	6.38	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Jordanelle West	Surface	**UTU-094905** (ROW-Other-FLPMA) BLX Land, LLC, Pending	N/A	N/A	**UMC-442183 & UMC-442193** (2 Claims) BLX Land LLC

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Parcel 17	Wasatch	2S	4E	35	SLB&M	Lot 25 [Part of SW4SW4SW4]	6.17	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Jordanelle West	Surface	**UTU-094905** (ROW-Other-FLPMA) BLX Land, LLC, Pending	N/A	N/A	**UMC-442183** (1 Claim) BLX Land LLC
Parcel 17	Wasatch	2S	4E	36	SLB&M	Lots 7(34.74), 8(17.75), 9(33.57) [Lots aka Part of NW4NW4, Part of W2SW4]	86.06	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Jordanelle West	Surface	**UTU-094905** (ROW-Other-FLPMA) BLX Land, LLC, Pending	N/A	N/A	**UMC-442166 to UMC-442173** (8 Claims) BLX Land LLC
Parcel 17	Wasatch	3S	4E	2	SLB&M	Lots 6(29.34), 9(23.76), 10(37.29), 11(8.47), 17(6.52), 18(10.20), 19(11.65), 20(38.91) [aka Part of SW4NE4, Part of W2]	166.14	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Jordanelle West	Surface	**UTU-094905** (ROW-Other-FLPMA) BLX Land, LLC, Pending	N/A	N/A	**UMC-442173 to UMC-442192** (20 Claims) BLX Land LLC
Parcel 17	Wasatch	3S	4E	3	SLB&M	Lot 16 [aka Part of NE4NE4]	25.06	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Jordanelle West	Surface	**UTU-094905** (ROW-Other-FLPMA) BLX Land, LLC, Pending	N/A	N/A	**UMC-442183 to UMC-442188, UMC-442193 to UMC-442196, UMC-442201 to UMC-442203** (13 Claims) BLX Land LLC
TOTAL							**289.81**	**0.00**	**0.00**	**0.00**	**0.00**							
Wallsburg																		
Parcel 20	Wasatch	5S	5E	15	SLB&M	SW4NE4, NW4, N2SW4	280.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Wallsburg	Surface	N/A	N/A	N/A	N/A
Parcel 20	Wasatch	5S	5E	23	SLB&M	NW4NW4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Wallsburg	Surface	N/A	N/A	N/A	N/A
Parcel 20	Wasatch	5S	5E	27	SLB&M	SE4NE4, SE4NW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Wallsburg	Surface	N/A	N/A	N/A	N/A
TOTAL							**400.00**	**0.00**	**0.00**	**0.00**	**0.00**							
Cedar Ridge																		
Parcel 21	Carbon	13S	16E	31	SLB&M	Lot 1(40.01), NE4, SE4NW4, NE4SW4, N2SE4 [Lot aka NW4NW4]	360.01	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Cedar Ridge	Surface	**UTU-040135** (ROW-Roads), BLM Price Office, Perpetual; **UTU-095835** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
TOTAL							**360.01**	**0.00**	**0.00**	**0.00**	**0.00**							
Castle Dale																		
Parcel 23	Emery	18S	9E	31	SLB&M	Lots 1(40.35), 2(40.25), 4(40.05), E2, E2NW4 [Lots aka W2NW4, SW4SW4]	520.65	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	**UTU-066124.AE** (ROW-Roads Under RS 2477) Emery County, Pending; **UTU-091216** (ROW-Telephone & Telegraph, FLPMA) Emery Telcom, Exp 12/31/2045; **UTU-091280** (ROW-Power Trans) Clyde Magnuson, Exp 12/31/2045; **UTU-095160** (ROW-Power Trans) Hornshadow Solar 2 LLC, Pending; **UTU-095187** (ROW-Power Trans-FLPMA) Hornshadow Solar 2 LLC, Pending; **UTU-0142226** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2044; **UTU-095841** (ROW-Roads) BLM, Perpetual	**UTU-087151** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	N/A	N/A

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Parcel 23	Emery	18S	9E	33	SLB&M	SE4NE4, E2SE4	120.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	**UTU-066124.AE** (ROW-Roads Under RS 2477) Emery County, Pending; **UTU-091216** (ROW-Telephone & Telegraph, FLPMA) Emery Telcom, Exp 12/31/2045; **UTU-0142226** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2044	**UTU-087154** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	N/A	N/A
Parcel 24	Emery	19S	8E	1	SLB&M	Lots 2(41.40), 3(41.40), 5(42.18), 6(42.08), S2NE4, SE4NW4, SW4, S2SE4 [Lots aka NW4NE4, NE4NW4, N2SE4]	527.06	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	**UTU-022141** (ROW-Power Tran Line) Pacificorp DBA UPL, Exp 09/10/2025; **UTU-035936** (ROW-Power Trans) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2045; **UTU-095187** (ROW-Power Trans) Hornshadow Solar 2 LLC, Pending	**UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**; **UTU-091334** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit	**WR #93-1272** (Stockwatering) Flow Unevaluated; **WR #93-1274** (Stockwatering) Flow Unevaluated.	N/A
Parcel 24	Emery	19S	8E	12	SLB&M	Lots 1(37.35), 2(38.13), 3(37.23), 4(36.45), NE4, NE4NW4 [Lots aka SE4]	349.16	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	N/A	**UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**; **UTU-091334** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit	**WR #93-3377** (Stockwatering) Flow Unevaluated	N/A
Parcel 25	Emery	19S	9E	4	SLB&M	SW4NW4, NW4SW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	N/A	**UTU-087336** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	N/A	N/A
Parcel 25	Emery	19S	9E	5	SLB&M	Lots 1(39.96), 2(39.98), S2NE4, SE4 [Lots aka N2NE4]	319.94	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	N/A	**UTU-087336** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	N/A	N/A
Parcel 25	Emery	19S	9E	7	SLB&M	Lots 2(40.26), 3(40.30), NE4NE4 [Lots aka SW4NW4, NW4SW4]	120.56	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	N/A	**UTU-087337** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	**WR #93-2265** (Stockwatering) Flow Unevaluated	N/A

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Parcel 25	Emery	19S	9E	8	SLB&M	N2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Castle Dale	Surface	N/A	**UTU-087337** (O&G) WEM Dragon LLC, Committed to Dragon O&G Unit; **UTU-090533X** (O&G Unit) Liberty Pioneer Energy SRC Inc, **Exp 05/26/2021**	**WR #93-2266** (Stockwatering) Flow Unevaluated	N/A
TOTAL							**2,357.37**	**0.00**	**0.00**	**0.00**	**0.00**							
Millsite Reservoir																		
Parcel 26	Emery	20S	6E	11	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Millsite Reservoir	Surface	**UTU-067436** (ROW-Irrigation Facility) Ferron Canal & Resources, Perpetual	**UTU-090084** (Sand & Gravel, Govt Subdivision) Ferron Canal & Resources, Exp 03/04/2024	N/A	N/A
Parcel 26	Emery	20S	6E	12	SLB&M	Lots 5(34.52), 7(2.19), 12(8.55), 14(25.98), 15(37.63), 18(21.09), W2SW4, SE4SW4 [Lots aka Part of S2NW4, Part of NE4SW4, Part of W2SE4, Part of SE4SE4]	249.96	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Millsite Reservoir	Surface	**UTU-054669** (ROW-Water Facility) Ferron Canal & Resources, Exp 12/31/2044; **UTU-054674** (ROW-Roads) Emery County, Perpetual; **UTU-066122** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2050; **UTU-067436** (ROW-Irrigation Facility) Ferron Canal & Resources, Perpetual; **UTU-091902** (ROW-Telephone & Telegraph, FLPMA) Emery Telecom, Exp 12/31/2046; **UTU-095839** (ROW-Roads) BLM, Perpetual; **UTU-095840** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
TOTAL							**889.96**	**0.00**	**0.00**	**0.00**	**0.00**							
Emery City																		
Parcel 27	Emery	21S	6E	27	SLB&M	Lot 1(39.29), W2NE4 [Lot aka NE4NW4]	119.29	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Emery City	Surface	N/A	**UTU-092011** (O&G) Stephen Smith Inc., Exp. 09/30/2026	N/A	N/A
TOTAL							**119.29**	**0.00**	**0.00**	**0.00**	**0.00**							
Green River West																		
Parcel 28	Emery	21S	14E	13	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-374395, UMC-374396, UMC-374402, UMC-374403, UMC-374423 to UMC-374426, UMC-380232, UMC-380233, UMC-380236, UMC-380242** (12 Claims) Pinon Ridge Mining LLC

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Parcel 28	Emery	21S	14E	14	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-045857** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2041; **UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-371695 to UMC-371698, UMC-372190 to UMC-372195** (10 Claims) Metamin Enterprises US Inc; **UMC-374380, UMC-374381** (2 Claims) Ruth Liebel; **UMC-374390 to UMC-374395, UMC-374397 to UMC-374402, UMC-374411 to UMC-374413, UMC-374418 to UMC-374423** (21 Claims) Pinon Ridge Mining LLC
Parcel 28	Emery	21S	14E	15	SLB&M	SE4SE4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-045857** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2041; **UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-094937** (AML Physical Safety Reclamation-Uranium & Other Minerals) BLM Price Office, Approval Given; **UTU-95615** (AML Physical Safety Reclamation) BLM Price Office, Pending	N/A	N/A	**UMC-372190, UMC-372192, UMC-372194** (3 Claims) Metamin Enterprises US Inc.; **UMC-374375 to UMC-374380, UMC-374385** (7 Claims) Ruth Liebel; **UMC-374382 to UMC-374384** (3 Claims) Mary A Kimmerle
Parcel 28	Emery	21S	14E	22	SLB&M	E2E2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-088257** (Uranium Plan Mining) Kimmerle Mining LLC, Related to Mining Claims; **UTU-094937** (AML Physical Safety Reclamation) BLM Price Office, Approval Given; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-371699 to UMC-371702, UMC-372194, UMC-372196** (6 Claims) Metamin Enterprises US Inc.; **UMC-374304, UMC-402449** (2 Claims) Pinon Ridge Mining LLC; **UMC-374346 to UMC-374349, UMC-374358 to UMC-374360, UMC-374389, UMC-402448, UMC-425323, UMC-442208** (11 Claims) Kimmerle Mining LLC; **UMC-374382 to UMC-374384, UMC-374386 to UMC-374388** (6 Claims) Mary A. Kimmerle; UMC-374385 (1 Claim) Ruth Liebel

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Parcel 28	Emery	21S	14E	23	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-371700, UMC-371702, UMC-372194 to UMC-372197, UMC-373278 to UMC-373281** (10 Claims) Metamin Enterprises US Inc; **UMC-373945 to UMC-373954, UMC-374304 to UMC-374313, UMC-374352, UMC-374353, UMC-374365, UMC-374366, UMC-374397 to UMC-374402, UMC-374406, UMC-374407, UMC-389519 to UMC-389524, UMC-402449 to UMC-402456** (46 Claims) Pinon Ridge Mining LLC
Parcel 28	Emery	21S	14E	24	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-373946, UMC-373948, UMC-373950, UMC-373952, UMC-373954, UMC-374313 to UMC-374318, UMC-374354 to UMC-374356, UMC-374372 to UMC-374374, UMC-374402, UMC-374403, UMC-374408 to UMC-374410, UMC-374426, UMC-380242, UMC-380258, UMC-389519, UMC-389524, UMC-402456** (28 Claims) Pinon Ridge Mining LLC
Parcel 28	Emery	21S	14E	25	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	N/A	N/A	N/A	**UMC-374250 to UMC-374255, UMC-374259 to UMC-374267, UMC-374313 to UMC-374318, UMC-374336 to UMC-374341** (27 Claims) Pinon Ridge Mining LLC
Parcel 28	Emery	21S	14E	26	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	N/A	N/A	N/A	**UMC-374250, UMC-374259, UMC-374289 to UMC-374298, UMC-374304 to UMC-374313, UMC-374327 to UMC-374336** (32 Claims) Pinon Ridge Mining LLC; **UMC-398488 to UMC-398495** (8 Claims) Metamin Enterprises US Inc.

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Parcel 28	Emery	21S	14E	27	SLB&M	E2E2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-374304, UMC-374327** (2 Claims) Pinon Ridge Mining LLC; **UMC-398488, UMC-398490, UMC-398492, UMC-398494** (4 Claims) Metamin Enterprises US Inc; **UMC-425323, UMC-425324, UMC-442208, UMC-442209, UMC-442211, UMC-442212** (6 Claims) Kimmerle Mining LLC
Parcel 28	Emery	21S	14E	34	SLB&M	NE4NE4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-066124.AI** (ROW-Roads Under RS 2477) Emery County, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-398494** (1 Claim) Metamin Enterprises US Inc.
Parcel 28	Emery	21S	14E	35	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-095529** (ROW-Fiber Optic Tel & Telegram) Emery Telcom, Pending; **UTU-0145293** (ROW-Federal Aid HWY) Federal Highway Administration, Perpetual; **UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	**UMC-374259, UMC-374268 to UMC-374288, UMC-374294 to UMC-374298** (27 Claims) Pinon Ridge Mining LLC; **UMC-398494, UMC-398495** (2 Claims) Metamin Enterprises US Inc.
Parcel 29	Emery	21S	15E	10	SLB&M	NW4NE4, N2NW4	120.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-015341** (ROW-Power Trans) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2036; **UTU-021372** (ROW-Power Trans) Pacificorp DBA UPL, Exp. 12/31/2058	N/A	N/A	N/A
Parcel 29	Emery	21S	15E	11	SLB&M	N2NE4, NE4NW4	120.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-021372** (ROW-Power Trans) Pacificorp DBA UPL, Exp. 12/31/2058	N/A	N/A	N/A
Parcel 30	Emery	22S	14E	1	SLB&M	Lots 1(39.81), 2(39.44), 3(39.06), 4(38.65), S2N2, S2 [ALL]	637.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Green River West	Surface	**UTU-095842** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
TOTAL							**5,757.00**	**0.00**	**0.00**	**0.00**	**0.00**							
South Spanish Valley																		

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Parcel 32	San Juan	27S	23E	19	SLB&M	Lot 4(36.27), E2, E2SW4 [Lot aka SW4SW4]	436.27	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	South Spanish Valley	Surface	**UTSL-0062022** (Fed Aid HWY) Federal Highway Admin, Perpetual; **UTU-010657** (ROW-Power Trans) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2049; **UTU-043521** (ROW-O&G Pipelines) Mid-Amer Pipeline Company, Exp 12/31/2040; **UTU-073282** (ROW-Fiber Optic Facility) Frontier Communications, Exp 12/31/2025; **UTU-076958** (ROW-O&G Pipelines) Mid-America Pipeline, Exp 10/29/2028; **UTU-080812** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2035; **UTU-090791** (ROW-Fiber Optic Facility) Emery Telcom, Exp 12/31/2043; **UTU-0015595** (ROW-Power Trans) Pacificorp DA UPL, Exp 12/31/2055; **UTU-0015664** (ROW-O&G Pipelines) Northwest Energy Co., Exp 12/31/2024; **UTU-0025443** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2040; **UTU-0048144** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2040; **UTU 0142563** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2044; **UTU-0146915** (ROW-O&G Pipelines) Northwest Pipeline GP, Exp 12/31/2045; **UTU-0148006** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2046; **UTU 035443** (ROW-Power Trans) Pacificorp DBA UPL, Exp. 12/31/2040; **UTU-095899** (ROW-Roads) BLM, Pending; **UTU-95900** (ROW-Roads) BLM, Pending; **UTU-095901** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Pareel 32	San Juan	27S	23E	20	SLB&M	W2NW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	South Spanish Valley	Surface	**UTU-010657** (ROW-Power Transmission) Pacificorp DBA Rocky Mountain Power, Exp 12/31/2049; **UTU-080812** (ROW-Power Transmission) Pacificorp DBA UPL, Exp 12/31/2035; **UTU-0015595** (ROW-Power Transmission) Pacificorp DA UPL, Exp 12/31/2055; **UTU-0048144** (ROW-Power Transmission) Pacificorp DBA UPL, Exp 12/31/2040	N/A	N/A	N/A

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Parcel 32	San Juan	27S	23E	30	SLB&M	Lots 1(36.29), 2(36.31), 3(36.32), 4(36.33), E2, E2W2 [ALL]	625.25	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	South Spanish Valley	Surface	**UTSL-0662022** (Fed Aid HWY) Federal Highway Admin, Perpetual; **UTU-043521** (ROW-O&G Pipelines) Mid-Amer Pipeline Company, Exp 12/31/2040; **UTU-058680** (ROW-Roads) BLM, Perpetual; **UTU-073282** (ROW-Fiber Optic Facility) Frontier Communications, Exp 12/31/2025; **UTU-073283** (ROW-Roads) Robert Kerchen, Exp. 09/04/2026; **UTU-076958** (ROW-O&G Pipelines) Mid-America Pipeline, Exp 10/29/2028; **UTU-080811** (ROW-Roads) Kiley Miller & John Rzeczcki, Exp 12/31/2034; **UTU-090791** (ROW-Fiber Optic Facility) Emery Telcom, Exp 12/31/2043; **UTU-091006FD** (ROW-Roads) UT Trust Lands, Perpetual; **UTU-93630** (ROW-Roads) Zentrum LLC, Exp 12/17/2023; **UTU-0015664** (ROW-O&G Pipelines) Northwest Energy Co., Exp 12/31/2024; **UTU-0048144** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2040; **UTU 0142563** (ROW-Power Trans) Pacificorp DBA UPL, Exp 12/31/2044; **UTU-095901** (ROW-Roads) BLM, Pending; **UTU-095902** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 32	San Juan	27S	23E	31	SLB&M	Part Lot 1 (Northwest of HWY 191)	17.29	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	South Spanish Valley	Surface	**UTSL-0662022** (Fed Aid HWY) Federal Highway Admin, Perpetual; **UTU-043521** (ROW-O&G Pipelines) Mid-Amer Pipeline Company, Exp 12/31/2040; **UTU-073282** (ROW-Fiber Optic Facility) Frontier Communications, Exp 12/31/2025; **UTU-076958** (ROW-O&G Pipelines) Mid-America Pipeline, Exp 10/29/2028; **UTU-090791** (ROW-Fiber Optic Facility) Emery Telcom, Exp 12/31/2043; **UTU-093630** (ROW-Roads) Zentrum LLC, Exp 12/17/2023; **UTU-0015664** (ROW-O&G Pipelines) Northwest Energy Co., Exp 12/31/2024; **UTU-0048144** (ROW-Power Transmission) Pacificorp DBA UPL, Exp 12/31/2040	N/A	N/A	N/A
TOTAL							**1,158.81**	**0.00**	**0.00**	**0.00**	**0.00**							
Big Water																		
Parcel 33	Kane	43S	1E	6	SLB&M	Part of Lots 3-4, Part of SE4NW4, Part of E2SW4, Part of W2SE4	162.02	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Big Water Solar	Surface	**UTU-085472** (ROW-Water Facility) State of Utah Water Resources, Pending; **UTU-091221** (ROW-Fiber Optic Facility) South Central Communications, Exp 12/31/2045; **UTU-96253** (ROW for Roads) , BLM, Pending; **UTU-0020832** (Fed Aid HWY) Federal Highway Admin, Perpetual; **UTU-0035037.01** (ROW-Power Transmission) Garkane Energy Cooperative Inc, Exp 12/31/2042	**Grazing Permit**, 0200030, Danny Little, Little Livestock, Effective 5/1/20 to 4/30/30, Bunting Well Allotment, AZ04847	N/A	N/A

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Parcel 33	Kane	43S	1E	7	SLB&M	Part of NE4, Part of N2SE4, Part of SE4SE4	166.85	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Big Water Solar	Surface	N/A	**Grazing Permit**, 0200030, Danny Little, Little Livestock, Effective 5/1/20 to 4/30/30, Bunting Well Allotment, AZ04847	N/A	N/A
TOTAL							**328.87**	**0.00**	**0.00**	**0.00**	**0.00**							
Mineral Group Target Areas																		
Mercur Canyon																		
Parcel 34	Tooele	6S	4W	11	SLB&M	Lots 1(16.84), 2(37.68), 3(34.63), 4(26.61), 5(29.77), 6(6.17), 7(1.04), 8(1.33), 9(4.34), 10(12.70), NE4, E2NW4 [Lots aka Part of W2NW4, Part of N2SW4, Part of SE4SW4, Part of SE4]	411.11	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Mercur Canyon	Minerals	**UTU-047281** (ROW-Power Trans) PacifiCorp DBA Rocky Mountain Power, Exp. 12/31/2025; **UTU-095867** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-413344** (1 Claim) Ash-Ley Woods LLC; **UMC-417455, UMC-417460, UMC-417461, UMC-417466 to UMC-417478, UMC-417484, UMC-426669, UMC-426670** (19 Claims) Rush Valley Exploration Inc.
Parcel 34	Tooele	6S	4W	12	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Mercur Canyon	Minerals	**UTU-047281** (ROW-Power Trans) PacifiCorp DBA Rocky Mountain Power, Exp. 12/31/2025; **UTU-095867** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-417455, UMC-471460** (2 Claims) Rush Valley Exploration Inc.
TOTAL							**1,051.11**	**0.00**	**0.00**	**0.00**	**0.00**							
Southwest Tintic																		
Parcel 35	Juab	10S	3W	21	SLB&M	SE4SE4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-078540** (ROW-Tel & Teleg Fiber Optic) Skyline Telecom, Exp. 12/31/2033; **UTU-079766** (O&G Pipeline) UNEV Pipeline LLC, Exp 12/31/2039; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-437323, UMC-437330, UMC-437332, UMC-437334 to UMC-437336, UMC-437338** (7 Claims) Tintic Copper & Gold Inc.
Parcel 35M	Juab	10S	3W	21	SLB&M	SW4SW4	0.00	40.00	0.00	0.00	0.00	Acquire Minerals Only	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 35	Juab	10S	3W	22	SLB&M	W2NE4, W2	400.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-078540** (ROW-Tel & Teleg Fiber Optic) Skyline Telecom, Exp. 12/31/2033; **UTU-079766** (O&G Pipeline) UNEV Pipeline LLC, Exp 12/31/2039; **UTU-095792** (ROW-Roads) BLM, Pending	**UTU-093075** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437316 to UMC 437333, UMC-437336 to UMC-437339** (22 Claims) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	27	SLB&M	NW4, SE4SW4	200.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual; **UTU000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual; **UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-078540** (ROW-Tel & Teleg Fiber Optic) Skyline Telecom, Exp. 12/31/2033; **UTU-079766** (O&G Pipeline) UNEV Pipeline LLC, Exp 12/31/2039	**UTU-093075** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending; **UTU-093073** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437343 to UMC-437347, UMC-437356 to UMC-437361** (11 Claims) Tintic Copper & Gold Inc.

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Parcel 35	Juab	10S	3W	27	SLB&M	W2SW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual; **UTU000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual; **UTU-095792** (ROW-Roads) BLM, Pending	**UTU-093075** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437343 to UMC-437347, UMC-437356 to UMC-437361** (11 Claims) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	28	SLB&M	NW4SW4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual	N/A	N/A	**UMC-437340 to UMC-437342, UMC-437348 to UMC-437352** (8 Claims) Tintic Copper & Gold Inc.
Parcel 35M	Juab	10S	3W	28	SLB&M	N2	0.00	320.00	0.00	0.00	0.00	Acquire Minerals Only	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual	N/A	N/A	**UMC-437334, UMC-437335, UMC-437340 to UMC-437343** (6 Claims) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	29	SLB&M	SE4NE4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual	**UTU-093074** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437340** (1 Claim) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	31	SLB&M	NW4NE4, SE4NE4, SE4	240.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 35	Juab	10S	3W	31	SLB&M	Lots 2(40.12), 3(40.08), 4(40.02), SW4NE4, SE4NW4, E2SW4 [Lots aka SW4NW4, W2SW4]	280.22	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 35	Juab	10S	3W	33	SLB&M	N2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual	N/A	N/A	**UMC-437347 to UMC-437356, UMC-437365 to UMC-437372** (18 Claims) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	33	SLB&M	S2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual	**UTU-093074** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437371, UMC-437372, UMC-437386 to UMC-437390** (7 Claims) Tintic Copper & Gold Inc.
Parcel 35	Juab	10S	3W	34	SLB&M	N2N2, S2NE4, E2SW4, W2SE4	400.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-016969** (RR & Stations Outside AK) LA & SL RR, Perpetual; **UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	**UTU-093075** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc, Pending	N/A	**UMC-437347, UMC-437356 to UMC-437364, UMC-437372 to UMC-437385** (24 Claims) Tintic Copper & Gold Inc.
Parcel 36	Juab	11S	2W	7	SLB&M	Lots 17(0.21), 18(0.01), 19(0.47), 20(0.15), 21(0.01), 22(0.01), 23(0.31), 24(11.51), 25(36.29), Part of SE4 [Lots aka Part of NE4SW4NE4, Part of NW4NW4NW4, Part of SW4NW4NW4, Part of W2SW4NW4, Part of SE4SE4NW4, Part of NW4NW4SW4, Part of S2SW4]	128.97	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-380973, UMC-386352 to UMC-386367, UMC-386369, UMC-386371, UMC-386373, UMC-386375, UMC-386377, UMC-386379, UMC-386381, UMC-386383, UMC-386385, UMC-407168, UMC-407169, UMC-409920 to UMC-409922** (32 Claims) Freeport-McMoran Mineral Properties Inc.

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PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Parcel 36	Juab	11S	2W	8	SLB&M	Lots 4(28.64), 6(14.92), 11(14.23), 16(21.15) [Lots aka Part of W2E2, Part of S2SW4SE4NW4, Part of SW4]	78.94	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-407815, UMC-407816** (2 Claims) Paul N. & Raymond J. Lynch; **UMC-409920 to UMC-409923** (4 Claims) Freeport-McMoran Mineral Properties Inc.; **UMC-437467, UMC-444866 to UMC-444873** (9 Claims) Tintic Copper & Gold Inc.
Parcel 36	Juab	11S	2W	17	SLB&M	Lots 1(40.22), 2(40.39), 6(40.56), 7(40.40), 8(40.23), 9(7.29), 10(39.27), 14(4.51), 15(18.70), 16(24.85), 17(33.57), 18(25.04), SE4NE4 [Lots aka Part of S2S2NE4NE4, Part of W2SE4, Part of S2NW4, Part of N2SW4, Part of SW4SW4, SE4]	395.03	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-409920, UMC-443722 to UMC-443754, UMC-443764, UMC-443765, UMC-443782, UMC-443871** (38 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Juab	11S	2W	18	SLB&M	Lots 2(40.00), 3(40.00), 4(40.00), 9(32.39), 10(40.06), 11(15.17), 12(6.95), 13(27.93), 14(40.48), 15(27.95), 18(20.57), W2NE4, E2NW4 [Lots aka Part of E2NE4, Part of NW4NW4, SW4NW4, W2SW4, Part of E2SW4, Part of N2SE4, Part of SE4SE4]	491.50	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092401** (Surface Mgt-2 or More Minerals) Freeport McMoran Mineral Properties, **Exp. 07/19/2019**; **UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-380961, UMC-380963, UMC-380965, UMC-380967, UMC-380969, UMC-380971, UMC-380973, UMC-380975, UMC-380977, UMC-380985, UMC-386334 to UMC-386351, UMC-386353, UMC-386355, UMC-386357, UMC-386359, UMC-386361, UMC-386363, UMC-386365, UMC-386367, UMC-407168, UMC-409919, UMC-409920,** **UMC-443722 to UMC-443726** (44 Claims) Freeport-McMoran Mineral Properties Inc.; **UMC-437468** (1 Claim) Tintic Copper & Gold Inc.
Parcel 36	Juab	11S	2W	19	SLB&M	Lots 17(5.51), 20(30.25), 21(15.89), 22(9.33), 23(36.84), 24(14.98), 25(18.99), 26(42.16) [Lots aka Part of E2NE4, Part of NE4NW4, Part of W2W2, Part of SE4SW4, Part of S2SE4]	173.95	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-380969, UMC-380979, UMC-380981, UMC-380983, UMC-406667 to UMC-406671, UMC-443703, UMC-443704, UMC-443714 to UMC-443722** (20 Claims) Freeport-McMoran Mineral Properties Inc.; **UMC-437432 to UMC-437438, UMC-437468 to UMC-437470** (10 Claims) Tintic Copper & Gold Inc.

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Parcel 36	Juab	11S	2W	20	SLB&M	Lots 1(40.36), 2(40.25), 3(40.13), 8(40.36), 9(40.06), 13(34.60), 14(40.29), 15(40.17), 16(40.06), 17(30.02), 18(30.11), 19(35.59), 20(40.15), 21(38.86), 22(8.85), 23(7.03) [All, Less Mining Claim]	546.89	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-443704, UMC-443715 to UMC-443722, UMC-443757 to UMC-443782, UMC-443791, UMC-443792, UMC-443809, UMC-443835, UMC-443863 to UMC-443871** (48 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Juab	11S	2W	21	SLB&M	Part of Lots 4-5, Part of SW4 [Lots aka Part of W2W2NW4]	158.15	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-443835, UMC-443836, UMC-443853, UMC-443863 to UMC-443886, UMC-443888, UMC-443889** (29 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Utah	11S	2W	21	SLB&M	Lots 1(40.06), 2(40.17), 3(40.27), Part of Lots 4 & 5, 6(40.27) 7(40.17), 8(40.06), Part of E2SW4, SE4 [Lots aka Part of N2]	483.59	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-443835, UMC-443836, UMC-443853, UMC-443854, UMC-443863 to UMC-443886, UMC-443888 to UMC-443898** (39 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Juab	11S	2W	29	SLB&M	Lots 1(40.15), 2(40.46), 3(40.77), 4(35.24), 5(35.27), 6(40.77), 7(40.46), 8(40.15), 10(40.06), 11(40.03), 12(34.46), 13(34.48), 14(40.03), 15(40.06) [Lots aka N2, SW4, W2SE4]	542.39	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU 095792** (ROW-Road) BLM, Pending	N/A	**WR #68-2554** (Stockwatering & Other) Flow 0.014 cfs	**UMC-443704 to UMC-443712, UMC-443783 to UMC-443809, UMC-443827, UMC-443831 to UMC-443835** (42 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Juab	11S	2W	30	SLB&M	Lots 1(40.88), 2(40.88), 3(40.88), 4(42.21), 7(41.79), 8(40.31), 9(40.15), 10(40.22), 11(40.28), 12(36.67), 13(33.37), SE4NW4, E2SW4, W2SE4 [All, Less Mining Claim]	637.64	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437432, UMC-437436 to UMC-437439** (5 Claims) Tintic Copper & Gold Inc.; **UMC-443680 to UMC-443712** (33 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 36	Juab	11S	2W	31	SLB&M	Lots 1(40.77), 2(40.55), 4(40.11), N2NE4, SE4NE4, NE4NW4, SE4SW4, SE4 [Lots aka W2NW4, SW4SW4]	481.43	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-091042** (ROW-Roads) Juab County, Exp 12/31/2045; **UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-443648 to UMC-443664, UMC-443666 to UMC-443680, UMC-443694 , UMC-443695, UMC-443712** (35 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 37	Juab	11.5S	2.5W	35	SLB&M	Lots 1(41.76), 2(41.68), 3(41.61), 4(37.06), 5(35.82), 6(35.93), 7(36.04), S2NE4, SE4NW4, E2SW4, SE4 [All]	629.90	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	**WR #68-1757** (Stockwatering & Other) Flow 0.1 cfs	**UMC-443654, UMC-443655, UMC-443670, UMC-443671** (4 Claims) Freeport-McMoran Mineral Properties Inc.

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Parcel 38	Juab	11S	3W	1	SLB&M	Lot 7(32.77), Part of Lot 6, Part of SW4NW4, Part of W2SW4, Part of NE4SE4, Part of S2SE4 [Lots aka Part of E2SW4]	118.61	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-062931** (Fed Aid Hwy Sec 17) Fed Highway Admin, Perpetual	N/A	N/A	**UMC-386384 to UMC-386391** (8 Claims) Freeport-McMoran Mineral Properties Inc.; **UMC-435653, UMC-435654** (2 Claims) Northstar Mines LLC; **UMC-437453, UMC-437454, UMC-437463 to UMC-437465, UMC-437471, UMC-438645** (7 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	2	SLB&M	Lots 1(39.59), 2(39.25), 3(38.91), 4(38.57), 5(40.88), S2N2, SW4, W2SE4, SE4SE4 [All]	637.20	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-386391** (1 Claim) Freeport-McMoran Mineral Properties Inc.; **UMC-437396 to UMC-437400, UMC-437463, UMC-437464** (7 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	3	SLB&M	S2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-044448** (ROW-RR) Union Pacific Railroad & Los Angeles & SLC RR, Perpetual	**UTU-93074** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc., Pending	N/A	**UMC-437396** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	4	SLB&M	Lots 1(40.17), 2(39.77), S2N2, S2 [Lots aka N2NE4]	559.94	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	**UTU-93074** (Hardrock Prosp Permit-Lead) Tintic Copper & Gold Inc., Pending	N/A	**UMC-437386 to UMC-437390** (5 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	4	SLB&M	Lots 3(39.39), 4(38.99) [Lots aka N2NW4]	78.38	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	N/A	N/A	**UMC-437386 to UMC-437390** (5 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	5	SLB&M	S2S2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	6	SLB&M	Lots 8(40.28), 9(40.92), 10(41.05), S2NE4, SE4SW4, SE4 [Lots aka N2NE4, NE4NW4]	402.25	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-438863** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	6	SLB&M	Lots 11(41.16), 12(41.87), 13(42.37), 14(42.59), SE4NW4, NE4SW4 [Lots aka W2W2]	247.99	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	7	SLB&M	Lots 1(41.23), 2(41.13), 3(41.03), 4(40.93), E2SW4, W2SE4, SE4SE4 [Lots aka W2W2]	364.32	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-438646 to UMC-438662, UMC-438667 to UMC-438674, UMC-438721** (26 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	7	SLB&M	NE4, E2NW4, NE4SE4	280.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-438646 to UMC-438652, UMC-438657 to UMC-438662, UMC-438669 to UMC-438674** (19 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	8	SLB&M	N2, N2SW4, S2SE4	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437391 to UMC-437395, UMC-438662 to UMC-438666, UMC-438674 to UMC-438677** (14 Claims) Tintic Copper & Gold Inc.

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Parcel 38	Juab	11S	3W	8	SLB&M	S2SW4, N2SE4	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437391 to UMC-437395, UMC-438662 to UMC-438666, UMC-438674 to UMC-438677** (14 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	9	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	N/A	N/A	**UMC-437395** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	10	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-044448** (ROW-RR) Union Pacific Railroad & Los Angeles & SLC RR, Perpetual	N/A	N/A	**UMC-437396** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	11	SLB&M	N2NW4, SW4NW4, NW4SW4	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437396 to UMC-437405** (10 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	11	SLB&M	E2, SE4NW4, E2SW4, SW4SW4	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-437396 to UMC-437405** (10 Claims) Tintic Copper & Gold Inc.
Parcel 38M	Juab	11S	3W	12	SLB&M	Lot 2(33.79), NW4NW4, S2NW4, N2SW4, SW4SW4 [Lot aka NE4NW4]	0.00	273.79	0.00	0.00	0.00	Acquire Minerals Only	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	12	SLB&M	SE4SW4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	**WR #68-240** (Stockwatering) Flow 0.10 cfs	N/A
Parcel 38	Juab	11S	3W	12	SLB&M	Lot 1(38.11), Part of NE4NE4, SW4NE4, Part of SE4NE4, Part of E2SE4, W2SE4 [Lot aka NW4NE4]	291.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-380972, UMC-380973, UMC-386368 to UMC-386385** (20 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	13	SLB&M	Lot 1(40.31), NW4NE4, S2NE4, SE4 [Lot aka NE4NE4]	320.31	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-088107** (ROW-Pivot Crossing Public Land) Rowleys South Ridge Farms Inc., Pending, **UTU-092401** (Surface Mgt-2 or More Minerals) Freeport McMoran Mineral Properties, **Exp. 07/19/2019**	N/A	N/A	**UMC-380960 to UMC-380977, UMC-380985, UMC-380986** (20 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38M	Juab	11S	3W	13	SLB&M	N2SW4	0.00	80.00	0.00	0.00	0.00	Acquire Minerals Only	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	13	SLB&M	S2SW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A

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Parcel 38	Juab	11S	3W	14	SLB&M	W2, SE4	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-044448** (ROW-RR) Union Pacific Railroad & Los Angeles & SLC RR, Perpetual; **UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	N/A
Parcel 38S	Juab	11S	3W	14	SLB&M	NE4	0.00	0.00	160.00	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	15	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437406 to UMC-437410** (5 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	16	SLB&M	N2, SE4	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	N/A	N/A	**UMC-437406** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	17	SLB&M	E2NE4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-438666, UMC-438678 to UMC-438680, UMC-438690 to UMC-438692** (7 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	17	SLB&M	W2NE4, W2, SE4	560.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438662 to UMC-438666, UMC-438674 to UMC-438680, UMC-438686 to UMC-438692, UMC-438695 to UMC-438712** (37 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	18	SLB&M	Lots 3(41.08), 4(41.16), NE4, NE4NW4, NE4SE4 [Lots aka W2SW4]	322.24	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438655 to UMC-438662, UMC-438667 to UMC-438674, UMC-438681 to UMC-438686, UMC-438693 to UMC-438695, UMC-438704, UMC-438721, UMC-438730, UMC-438739 to UMC-438741, UMC-438750 to UMC-438752** (34 Claims) Tintic Copper & Gold Inc.

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PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Parcel 38	Juab	11S	3W	18	SLB&M	Lots 1(40.92), 2(41.00), SE4NW4, E2SW4, W2SE4, SE4SE4 [Lots aka W2NW4]	321.92	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027; **UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-438655 to UMC-438657, UMC-438667 to UMC-438669, UMC-438681 to UMC-438686, UMC-438693 to UMC-438695, UMC-438704, UMC-438721, UMC-438730, UMC-438739 to UMC-438741, UMC-438750 to UMC-438752** (24 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	19	SLB&M	Lots 1(41.00), 2(40.60), 3(40.20), 4(39.80), E2, E2W2 [All]	641.60	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438704, UMC-438750 to UMC-438752, UMC-438761, UMC-438770, UMC-438783 to UMC-438791** (15 Claims) Tintic Copper & Gold Inc.; **UMC-443713** (1 Claim) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	20	SLB&M	E2E2, SW4, SW4SE4	360.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438708 to UMC-438712, UMC-438791** (6 Claims) Tintic Copper & Gold Inc.
Parcel 38S	Juab	11S	3W	20	SLB&M	W2NE4, NW4, NW4SE4	0.00	0.00	280.00	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	**WR #68-2551** (Stockwatering & Other) Flow 0.00446 cfs	**UMC-438704 to UMC-438712** (9 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	21	SLB&M	NW4NE4, W2	360.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual; **UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-437406** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	22	SLB&M	NE4, SW4NW4, N2SE4	280.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437406 to UMC-437421** (16 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	22	SLB&M	N2NW4, SE4NW4, NE4SW4, SE4SE4	200.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437406 to UMC-437421** (16 Claims) Tintic Copper & Gold Inc.
Parcel 38S	Juab	11S	3W	22	SLB&M	SE4SW4, SW4SE4	0.00	0.00	80.00	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437413 to UMC-437421** (9 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	23	SLB&M	SW4SW4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437417, UMC-437419, UMC-437421** (3 Claims) Tintic Copper & Gold Inc.

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Parcel 38	Juab	11S	3W	23	SLB&M	N2, N2S2, SE4SW4, S2SE4 [Excepting therefrom, a strip of land 100 feet in width, as granted by Richard B. Moon and wife, to Oregon Short Line Railroad, by deed dated April 29, 1902, recorded in Book 58, page 16 of Deeds]	600.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-044448** (ROW-RR) Union Pacific Railroad & Los Angeles & SLC RR, Perpetual; **UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-406680 to UMC-406683** (4 Claims) Freeport-McMoran Mineral Properties Inc.; **UMC-437417, UMC-437419, UMC-437421, UMC-437426** (4 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	24	SLB&M	NW4	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092401** (Surface Mgt-2 or More Minerals) Freeport McMoran Mineral Properties, **Exp. 07/19/2019**; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual; **UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-406676, UMC-406680** (2 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	24	SLB&M	Lots 1(40.54), 2(36.71), N2NE4, SW4NE4, SW4, NW4SE4, S2SE4 [Lots aka SE4NE4, NE4SE4]	477.25	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-062931** (Fed Aid Hwy Sec 17) Fed Highway Admin, Perpetual; **UTU-092401** (Surface Mgt-2 or More Minerals) Freeport McMoran Mineral Properties, **Exp. 07/19/2019**; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual; **UTU 095792** (ROW-Road) BLM, Pending	N/A	N/A	**UMC-380968, UMC-380969, UMC-380978 to UMC-380984, UMC-406667 to UMC-406683** (26 Claims)Freeport-McMoran Mineral Properties Inc.; **UMC-437426 to UMC-437432** (7 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	25	SLB&M	E2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437427 to UMC-437432** (6 Claims) Tintic Copper & Gold Inc.; **UMC-443633 to UMC-443646, UMC-443680 to UMC-443686** (21 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	25	SLB&M	W2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-072919** (Fed Aid Hwy Sec. 317) Fed Highway Admn, Perpetual; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-437426 to UMC-437428** (3 Claims) Tintic Copper & Gold Inc.; **UMC-443633 to UMC-443639** (7 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	26	SLB&M	NW4NW4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437421, UMC-437423, UMC-437425** (3 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	26	SLB&M	NE4NW4, S2N2, S2	520.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-437421, UMC-437423, UMC-437425, UMC-437426, UMC-438812** (5 Claims) Tintic Copper & Gold Inc.

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Parcel 38S	Juab	11S	3W	26	SLB&M	N2NE4 [Less ROW for State Route U-26]	0.00	0.00	76.94	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-437426** (1 Claim) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	27	SLB&M	NE4NE4	40.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437420 to UMC-437425** (6 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	27	SLB&M	NW4NE4, S2N2, S2	520.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-437420 to UMC-437425** (6 Claims) Tintic Copper & Gold Inc.
Parcel 38S	Juab	11S	3W	27	SLB&M	N2NW4	0.00	0.00	80.00	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	29	SLB&M	SW4NE4, SE4SE4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-438808 to UMC-438810, UMC-438865 to UMC-438868** (7 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	29	SLB&M	N2N2, SE4NE4, S2NW4, SW4, N2SE4, SW4SE4	560.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438791, UMC-438807 to UMC-438810, UMC-438837, UMC-438865 to UMC-438868** (10 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	30	SLB&M	Lots 1(39.82), 2(40.26), NE4, E2NW4 [Lots aka W2NW4]	320.08	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438783 to UMC-438791, UMC-438799 to UMC-438807** (18 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	30	SLB&M	Lots 3(40.70), 4(41.14), E2SW4, SE4 [Lots aka W2SW4]	321.84	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-438799 to UMC-438807, UMC-438820, UMC-438828 to UMC-438837** (20 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	31	SLB&M	Lots 1(41.19), 2(40.85), 3(40.51), 4(40.17), E2, E2W2 [All]	642.72	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-092333** (ROW-Other) Utah Geological Survey, Exp. 12/31/2027	N/A	N/A	**UMC-438828 to UMC-438864** (37 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	33	SLB&M	SE4NE4, NW4NW4, SE4	240.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	N/A	N/A	**UMC-438867 to UMC-438870** (4 Claims) Tintic Copper & Gold Inc.
Parcel 38	Juab	11S	3W	34	SLB&M	S2NW4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	N/A
Parcel 38	Juab	11S	3W	34	SLB&M	NE4, N2NW4, S2	560.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-443605 to UMC-443609** (5 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 38	Juab	11S	3W	35	SLB&M	N2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-059239** (ROW-Tel & Teleg Fiber Optic) Worldcom Network Services Inc, 08/01/2036; **UTU-075937** (ROW- Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp. 09/27/2029; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-443605, UMC-443614, UMC-443615, UMC-443624** (4 Claims) Freeport-McMoran Mineral Properties Inc.

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Parcel 38	Juab	11S	3W	35	SLB&M	S2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTSL-062931** (Fed Aid Hwy Sec 17) Fed Highway Admin, Perpetual; **UTU-79766** (ROW-O&G Pipelines) UNEV Pipeline LLC, Exp. 12/31/2039; **UTU 067497** (Fed Aid Hwy Sec 317) Fed Highway Admn, Perpetual	N/A	N/A	**UMC-443605 to UMC-443624** (20 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 39	Juab	12S	3W	1	SLB&M	Lots 1(40.05), 2(40.15), 3(40.25), 4(40.35), S2N2, S2 [All]	640.80	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-443620, UMC-443654** (2 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 39S	Juab	12S	3W	2	SLB&M	Lots 1(40.42), 2(40.46), 3(40.50), 4(40.54), S2N2, S2 [All]	0.00	0.00	641.92	0.00	0.00	Acquire Surface Only	Southwest Tintic - Copper	Minerals	**UTU-075937** (ROW-Tel & Teleg Fiber Optic) Central Telcon Services LLC, Exp 09/27/2029; **UTU-079766** (ROW-O&G Pipeline) UNEV Pipeline LLC, Exp 12/31/2039; **UTU-0147190** (Fed Aid Hwy Sec.317) Fed Highway Adm., Perpetual; **UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-443609, UMC-443610, UMC-443619, UMC-443620** (4 Claims) Freeport-McMoran Mineral Properties Inc.
Parcel 39	Juab	12S	3W	3	SLB&M	Lots 1(40.46), 2(40.26), 3(40.06), 4(39.86), S2N2, S2 [All]	640.64	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-443609** (1 Claim) Freeport-McMoran Mineral Properties Inc.
Parcel 39	Juab	12S	3W	4	SLB&M	Lots 1(39.74), 2(39.70), 3(39.66), 4(39.62), S2N2, S2 [All]	638.72	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 39	Juab	12S	3W	5	SLB&M	Lots 3(39.65), 4(39.67), S2NW4, N2SW4, SW4SW4, E2SE4 [Lots aka N2NW4]	359.32	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	**UTU-000057RR** (RR & Stations Outside AK) Union Pacific Railroad, Perpetual	N/A	N/A	**UMC-438864** (1 Claim) Tintic Copper & Gold Inc.
Parcel 39	Juab	12S	3W	6	SLB&M	Lots 1(39.72), 2(39.80), 3(39.88), 4(40.00), 5(40.09), 6(40.15), 7(40.21), S2NE4, SE4NW4, E2SW4, SE4 [All]	639.85	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Southwest Tintic - Copper	Minerals	N/A	N/A	N/A	**UMC-438856 to UMC-438862, UMC-438864** (8 Claims) Tintic Copper & Gold Inc.
TOTAL							**27,695.58**	**713.79**	**1,318.86**	**0.00**	**0.00**							
Coyote Knoll																		
Parcel 40	Juab	12S	6W	5	SLB&M	Lots 1(40.70), 2(40.50), S2NE4, W2, SE4 [All]	641.20	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Coyote Knoll	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	**UTU-072898.01** (Gold-Surface Mgt-Plan Mining) McFarland & Hullinger, Brandon Steele, Darrell Steele, Dutch Peak Resources LLC, Desert Mountain Gold Inc., Amnor Energy Inc. Coyote Knoll Mining Claim	N/A	**UMC-304788, UMC-304789** (2 Claims) Clark, Gordon L., Marilyn S., Robert D. Nielson; **UMC-366787 to UMC-366789, UMC-410902 to UMC-410905, UMC-416216 to UMC-416221, UMC-416239 to UMC-416249** (24 Claims) Desert Mountain Gold LLC; **UMC-416817, UMC-416818, UMC-416831 to UMC-416833, UMC-417025** (6 Claims) Allison Knolls Resources LLC; **UMC-420387 to UMC-420389** (3 Claims) Clark, Robert D., Thomas E. Nielson

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Parcel 40	Juab	12S	6W	6	SLB&M	ALL	671.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Coyote Knoll	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-304786 to UMC-304788** (3 Claims) Clark, Gordon L., Marilyn S., Robert D. Nielson; **UMC-416248 to UMC-416268** (21 Claims) Desert Mountain Gold **UMC-416811, UMC-416813, UMC-416815, UMC-416826 to UMC-416831, UMC-417025 to UMC-417027** (12 Claims) Allison Knolls Resources **LLC; UMC-420389 to UMC-420392** (4 Claims) Clark, Robert D., Thomas E. Nielson
TOTAL							**1,312.20**	**0.00**	**0.00**	**0.00**	**0.00**							
Spor Mountain																		
Parcel 41	Juab	12S	12W	17	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Spor Mountain	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
Parcel 41	Juab	12S	12W	18	SLB&M	E2, E2W2	480.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Spor Mountain	Minerals	N/A	N/A	N/A	N/A
Parcel 41	Juab	12S	12W	26	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Spor Mountain	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-358203** (1 Claim) Kenneth F. Lowder; **UMC-445469 to UMC-445471** (3 Claims) 101017BC Inc.
Parcel 41	Juab	12S	12W	35	SLB&M	ALL, Less Mining Claim [Estimate Acreage Only]	614.23	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Spor Mountain	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	**UMC-358203, UMC-358204** (2 Claims) Kenneth F. Lowder; **UMC-445485 to UMC-445490, UMC-445492, UMC-445493** (8 Claims) 101017BC Inc.; **UMC-70966, UMC-70967** (2 Claims) Chesley & Black Mining LC
Parcel 41	Juab	12S	12W	36	SLB&M	W2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Spor Mountain	Minerals	**UTU-095792** (ROW-Roads) BLM, Pending	N/A	N/A	N/A
TOTAL							**2,694.23**	**0.00**	**0.00**	**0.00**	**0.00**							
Frisco District																		

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PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Parcel 42	Beaver	27S	13W	1	SLB&M	Lots 1(19.85), 2(18.40), 3(18.44), 4(18.48), 5(43.20), 6(43.14), 7(29.06), 8(29.37), 9(40.02), 10(43.07), SW4NE4, S2NW4, N2SW4, NW4SE4 [All, Less Mining Claims]	543.03	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	**UTU-092548** (ROW-Power Tran) PacifiCorp DBA Rocky Mountain Power, Exp. 12/31/2047	N/A	N/A	**UMC-130645 to UMC-130647, UMC-130650** (4 Claims) Betty L. Baxter, Brent R. McCulley, D. Carol McCulley, Martin A. McCulley, Wayne A. McCulley, **UMC-401974, UMC-401975, UMC-401982, UMC-401983** (4 Claims) Tamra Mining Co. LLC; **UMC-434869** (1 Claim) Volantis Resources Corp; **UMC-435186 to UMC-435189, UMC-435193 to UMC-435196, UMC-435200 to UMC-435203, UMC-435207 to UMC-435210, UMC-435214 to UMC-435217, UMC-435221 to UMC-435224, UMC-435230 to UMC-435237, UMC-435239** (33 Claims) Kennecott Exploration Co.
Parcel 42	Beaver	27S	13W	10	SLB&M	Lots 1(2.65), 2(8.03), 3(25.43), 4(33.92), 5(21.28), 6(47.32), SW4NW4, SW4, SW4SE4 [All, Less Mining Claims]	378.63	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	**UTU-95251** (Copper-Surface Mgt) Kennecott Exploration Co., Pending	N/A	N/A	**UMC-426463 to UMC-426467, UMC-426479, UMC-426480, UMC-426482, UMC-426484, UMC-426515, UMC-426709 to UMC-426713, UMC-426967, UMC-426969, UMC-426971, UMC-426972, UMC-426977 to UMC-426989, UMC-426992 to UMC-426997** (38 Claims) Volantis Resources Corp.
Parcel 42	Beaver	27S	13W	11	SLB&M	Lots 1(3.63), 2(25.39), 3(22.38), 4(39.84), 5(41.50), 6(14.36), 7(23.42), 8(16.30), 9(10.79) [All, Less Mining Claims]	197.61	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	N/A	N/A	N/A	**UMC-426466 to UMC-426470, UMC-426677 to UMC-426688, UMC-426699 to UMC-426705, UMC-426710, UMC-426712, UMC-426713** (27 Claims) Volantis Resources Corp. **UMC-435155** (1 Claim) Kennecott Exploration Co.

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Parcel 42	Beaver	27S	13W	12	SLB&M	Lots 1(46.59), 2(16.83), 3(38.33), 4(34.76), 5(10.79), 6(31.01), 7(38.49), 8(36.91), 9(20.28), 10(13.02), 11(35.77), 12(38.49), 13(42.48) [All, Less Mining Claims]	403.75	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	N/A	N/A	N/A	**UMC-130646 to UMC-130649** (4 Claims) Betty L. Baxter, Brent R. McCulley, D. Carol McCulley, Martin A. McCulley, Wayne A. McCulley; **UMC-426687 to UMC-426698, UMC-426705, UMC-426706** (14 Claim) Volantis Resources Corp;
																		UMC-435155 to UMC-435162, UMC-435173 to UMC-435179, UMC-435184, UMC-435185, UMC-435230 to UMC-435232, UMC-435234, UMC-435236 to UMC-435238 (24 Claims) Kennecott Exploration Co.
Parcel 42	Beaver	27S	13W	13	SLB&M	Lots 1(17.10), 5(2.38), 6(36.67), 7(39.62), 8(40.71), N2, W2SW4 [Lots aka Part of W2SW4, Part of N2SE4]	536.48	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	N/A	N/A	N/A	**UMC-401947, UMC-401948, UMC-401955, UMC-401956** (4 Claims) Tamra Mining Co. LLC; **UMC-426705, UMC-426706** (2 Claims) Volantis Resources Corp.; **UMC-435070, UMC-435073 to UMC-435075, UMC-435090 to UMC-435098, UMC-435112 to UMC-435121, UMC-435135 to UMC-435144, UMC-435155 to UMC-435162** (41 Claims) Kennecott Exploration Co.
Parcel 42	Beaver	27S	13W	14	SLB&M	Lots 1(24.43), 2(1.47), 3(37.26), 4(39.50), 5(21.24), 6(19.61), 7(41.10), 8(40.65), 9(39.15), 10(20.08), 11(36.00), 12(37.32), 13(34.98), W2SE4 [All, Less Mining Claims]	472.79	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	N/A	**UTU-95252** (Copper - Surface Mgt) Kennecott Exploration Co., Pending	N/A	**UMC-401946, UMC-401954** (2 Claims) Tamra Mining Co. LLC; **UMC-426467, UMC-426469, UMC-426470, UMC-426487 to UMC-426496, UMC-426500 to UMC426503, UMC-426505, UMC-426507, UMC-426509, UMC-426699 to UMC-426705** (27 Claims) Volantis Resources Corp;
																		UMC-435066 to UMC-435070, UMC-435086 to UMC-435090, UMC-435108 to UMC-435112, UMC-435132 to UMC-435135, UMC-435155 (20 Claims) Kennecott Exploration Co.

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Parcel 42	Beaver	27S	13W	15	SLB&M	Lots 1(36.16), 2(40.44), 3(21.07), 4(10.28), 5(1.50), 6(0.09), 7(4.13), 8(38.91), 9(26.53), 10(1.26), 11(0.05), 12(0.65), 13(28.06), NW4NE4, N2NW4, SW4NW4 [All, Less Mining Claims]	369.13	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Frisco District - Copper	Minerals	N/A	N/A	N/A	**UMC-426461, UMC-426465, UMC-426467, UMC-426471 to UMC-426486, UMC-426488, UMC-426497 to UMC-426501, UMC-426511 to UMC-426514, UMC-426723, UMC-426967 to UMC-426972, UMC-428569 to UMC-428572** (40 Claims) Volantis Resources Corp
TOTAL							**2,901.42**	**0.00**	**0.00**	**0.00**	**0.00**							
Pine Grove																		
Parcel 43	Beaver	28S	15W	31	SLB&M	Lots 1(37.51), 2(37.57), 3(37.63), 4(37.69), E2, E2W2 [All]	630.40	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	**UMC-418103 to UMC-418112, UMC-418121 to UMC-418130** (20 Claims) Phelps Dodge Molybdenum Corp
Parcel 43	Beaver	28S	15W	33	SLB&M	S2S2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	N/A
Parcel 43	Beaver	28S	15W	34	SLB&M	S2S2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	N/A
Parcel 43	Beaver	28S	15W	35	SLB&M	S2S2	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	N/A
Parcel 44	Beaver	28S	16W	26	SLB&M	Part of SE4SW4, SW4SE4[CX1 & (B)(3)]	23.07	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	**UMC-336285 to UMC-336287, UMC-336302, UMC-418006 to UMC-418009, UMC-418023 to UMC-418026, UMC-418033 to UMC-418036, UMC-418047 to UMC-418051** (21 Claims) Phelps Dodge Molybdenum Corp
Parcel 44	Beaver	28S	16W	35	SLB&M	Mineral Survey 4888 [Part of W2NE4, Part of NE4NW4, Part of E2SW4, Part of W2SE4], Part of NE4NW4 [(B)(3) Parcel] Part of S2NE4, Part of SE4[CX160 Parcel]	279.66	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Pine Grove	Minerals	N/A	N/A	N/A	**UMC-336288 to UMC-336293, UMC-336296, UMC-336301, UMC-417993, UMC-417994, UMC-418001, UMC-418010 to UMC-418018, UMC-418027, UMC-418028, UMC-418037 to UMC-418042, UMC-418051 to UMC-418058** (36 Claims) Phelps Dodge Molybdenum Corp
TOTAL							**1,413.13**	**0.00**	**0.00**	**0.00**	**0.00**							
Williams Draw																		

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Parcel 46	Emery	16S	14E	25	SLB&M	NW4SW4, S2SW4, SE4	280.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095176** (ROW-Roads) Emery County Coal Resources, Inc., 12/31/2050; **UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending; **UTU-095843** (ROW-Roads) BLM, Perpetual; **UTU-095845** (ROW-Roads) BLM, Perpetual	**UTU-080043** (Coal) Utah American Energy Inc, Pending	**WR #91-5174** (Stockwatering) 1.624 acft.	N/A
Parcel 46C	Emery	16S	14E	25	SLB&M	NE4SW4	0.00	0.00	0.00	40.00	40.00	Acquire Coal Only	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 46	Emery	16S	14E	26	SLB&M	SE4	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 46	Emery	16S	14E	35	SLB&M	NE4	160.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 46	Emery	16S	15E	30	SLB&M	Lots 3(35.08), 4(35.14), E2SW4 [Lots aka W2SW4]	150.22	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 46	Emery	16S	15E	31	SLB&M	Lots 1(35.18), 2(35.20), 3(35.24), 4(35.26), NE4, E2NW4, NE4SW4, NW4SE4, S2SE4 [Lots aka W2W2]	540.88	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095176** (ROW-Roads) Emery County Coal Resources, Inc., 12/31/2050; **UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending; **UTU-96032** (Temporary Waterline) Emery County Coal Recoures, Inc., Exp. 07/31/2023; **UTU-095843** (ROW-Roads) BLM, Perpetual	**UTU-080043** (Coal) Utah American Energy Inc, Pending	**WR #91-2535** (Stockwatering) 0.012 cfs	N/A
Parcel 46C	Emery	16S	15E	31	SLB&M	SE4SW4, NE4SE4	0.00	0.00	0.00	0.00	80.00	Acquire Coal Only	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 47	Emery	17S	14E	1	SLB&M	Lots 1(11.94), 2(12.05), 3(11.97), 6(40.00), 7(40.00), 8(40.00), S2NE4, SE4NW4, E2SW4, SE4 [Lots aka N2NE4, NE4NW4]	515.96	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 47	Emery	17S	14E	12	SLB&M	NE4, E2NW4, NE4SW4, N2SE4	360.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 48	Emery	17S	15E	5	SLB&M	Lots 3(44.74), 4(44.69), S2NW4, SW4 [Lots aka N2NW4]	329.43	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 48	Emery	17S	15E	6	SLB&M	Lots 1(44.44), 2(44.01), 3(43.58), 4(35.62), 5(35.18), 6(35.18), 7(35.18), S2NE4, SE4NW4, E2SW4, SE4 [ALL]	633.19	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending; **UTU-095843** (ROW-Roads) BLM, Perpetual	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
Parcel 48	Emery	17S	15E	7	SLB&M	Lots 1(35.54), 2(35.47), 3(35.39), 4(35.32), E2, E2W2 [All]	621.72	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending; **UTU-095843** (ROW-Roads) BLM, Perpetual	**UTU-080043** (Coal) Utah American Energy Inc, Pending	**WR #91-4516** (Stockwatering & Other) Flow Unevaluated. Pending Adjudication. Validity is in question.	N/A

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Parcel 48	Emery	17S	15E	8	SLB&M	W2	320.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Williams Draw	Minerals	**UTU-095445** (Coal Exploration License) Emery County Coal Resources, Inc., Pending	**UTU-080043** (Coal) Utah American Energy Inc, Pending	N/A	N/A
TOTAL							**4,071.40**	**0.00**	**0.00**	**40.00**	**120.00**							
Walker Flat																		
Parcel 49	Sevier	23S	5E	1	SLB&M	Lots 1(40.05), 2(40.14), Part of Lot 3, S2NE4, Part of SE4NW4, Part of N2SW4, Part of SW4SW4, SE4SW4, SE4 [East of HWY 10]	471.03	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	N/A	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	N/A	N/A
Parcel 49	Sevier	23S	5E	11	SLB&M	Part of E2 [East of HWY 10]	166.32	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	**UTU-043522** (ROW-Roads) Sevier County, Exp. 12/31/2039	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	N/A	N/A
Parcel 49	Sevier	23S	5E	12	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	**UTSL-0062677** (Fed Aid Hwy) Federal Highway Admin, Perpetual; **UTU-043522** (ROW-Roads) Sevier County, Exp. 12/31/2039	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	**WR #94-790** (Stockwatering) 0.067 cfs	N/A
Parcel 50	Emery	23S	6E	5	SLB&M	Lots 1(40.20), 2(40.22), 3(40.22), S2NW4, W2SW4 [Lots aka N2NE4, NE4NW4]	280.64	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	**UTU-092562** (ROW-Underground ROW to Coal Lease) Bronco Utah Operations, LLC, Exp. 12/31/2038; **UTU-095838** (ROW-Roads) BLM, Perpetual	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	N/A	N/A
Parcel 50	Emery	23S	6E	6	SLB&M	Lots 6(40.19), 7(40.26), S2NE4, E2SW4, SE4 [Lots aka W2SW4]	400.45	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	N/A	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	N/A	N/A
Parcel 50	Emery	23S	6E	7	SLB&M	Lots 1(40.30), 2(40.28), N2NE4, NE4NW4 [Lots aka W2NW4]	200.58	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Walker Flat - Coal	Minerals	N/A	**UTU-93214** (Coal) Bronco Utah Reserves, Inc., Pending	N/A	N/A
TOTAL							**2,159.02**	**0.00**	**0.00**	**0.00**	**0.00**							
Oil & Gas Group Target Areas																		
IPP Minerals																		
Parcel 51M	Millard	15S	6W	18	SLB&M	Lots 2(40.46), 3(40.50), 4(40.54), E2SW4 [Lots aka SW4NW4, W2SW4]	0.00	201.50	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085382** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 51M	Millard	15S	6W	19	SLB&M	Lots 1(40.52), 2(40.44), 3(40.36), 4(40.28), E2NW4, NE4SW4 [Lots aka W2W2]	0.00	281.60	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085382** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	10	SLB&M	ALL	0.00	640.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085382** (Sodium) Magnum Energy LLC, Pending Permit; **UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	11	SLB&M	ALL	0.00	640.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085382** (Sodium) Magnum Energy LLC, Pending Permit; **UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A

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Parcel 52M	Millard	15S	7W	12	SLB&M	SW4SW4	0.00	40.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	13	SLB&M	NW4NE4, S2NE4, NW4, S2	0.00	600.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	14	SLB&M	N2, SE4	0.00	480.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	15	SLB&M	N2N2, SW4NW4, W2SW4	0.00	280.00	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
Parcel 52M	Millard	15S	7W	24	SLB&M	Lots 1(44.10), 2(30.71), 5(17.38), 7(30.72), N2, N2SE4 [Lots aka Part N2SW4, Part SE4SW4, Part S2SE4]	0.00	522.91	0.00	0.00	0.00	Acquire Minerals Only	IPP Minerals	Oil & Gas	N/A	**UTU-085383** (Sodium) Magnum Energy LLC, Pending Permit	N/A	N/A
TOTAL							**0.00**	**3,686.01**	**0.00**	**0.00**	**0.00**							
Lapoint East																		
Parcel 53	Uintah	5S	19E	10	SLB&M	E2NE4	80.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Lapoint East	Oil & Gas	**UTU-039778** (ROW-Water Facility) Tridell-Lapoint Water, Exp. 06/29/2037; **UTU-06912553** (ROW-Roads) Uintah County, Pending; **UTU-091239** (ROW-Roads) Uintah County, Pending: **UTU 096154** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
Parcel 53	Uintah	5S	19E	11	SLB&M	E2NE4, E2NW4NE4, E2W2NW4NE4, E2SW4NE4, E2W2SW4NE4, W2SW4SW4NE4, W2NW4, S2SE4NW4, N2SW4, SE4SW4, SE4	525.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Lapoint East	Oil & Gas	**UTU-06912553** (ROW-Roads) Uintah County, Pending; **UTU-091239** (ROW-Roads) Uintah County, Pending; UTU-091239 (ROW-Roads) Uintah County, Pending: **UTU 096154** (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
Parcel 53M	Uintah	5S	19E	11	SLB&M	W2W2NW4NE4, W2NW4SW4NE4, NE4NW4, N2SE4NW4	0.00	75.00	0.00	0.00	0.00	Acquire Minerals Only	Lapoint East	Oil & Gas	**UTU-091239** (ROW-Roads) Uintah County, Pending	**UTU-092823** (Sand & Gravel FUP - Govt Subdivision) Uintah County Road Dept, Pending	N/A	N/A
Parcel 53	Uintah	5S	19E	13	SLB&M	ALL	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Lapoint East	Oil & Gas	**UTU-023779** (ROW-O&G Pipelines) Questar Gas Co., Exp. 12/31/2035; **UTU-091239** (ROW-Roads) Uintah County, Pending; **UTU-0046143** (ROW-Power Tran-FLPMA) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2040; **UTU-091239** (ROW-Roads) Uintah County, Pending; **UTU-091239** (ROW-Roads) Uintah County, Pending: UTU 096154 (ROW-Roads) BLM, Perpetual	N/A	N/A	N/A
Parcel 53	Uintah	5S	19E	14	SLB&M	E2, NE4NW4	360.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Lapoint East	Oil & Gas	**UTU-023779** (ROW-O&G Pipelines) Questar Gas Co., Exp. 12/31/2035; **UTU-091239** (ROW-Roads) Uintah County, Pending; **UTU-0046143** (ROW-Power Tran-FLPMA) Pacificorp DBA Rocky Mountain Power, Exp. 12/31/2040; **UTU-9335064** (ROW-Roads) Uintah County, Pending; **UTU-091239** (ROW-Roads) Uintah County, Pending; **UTU-091239** (ROW-Roads) Uintah County, Pending: UTU 096154 (ROW-Roads) BLM, Perpetual	N/A	**WR #45-2916** (Stockwatering) Flow Unevaluated	N/A
Parcel 53OG	Uintah	5S	19E	14	SLB&M	SE4NW4, E2SW4	0.00	0.00	0.00	120.00	0.00	Acquire Oil & Gas Only	Lapoint East	Oil & Gas	**UTU-091239** (ROW-Roads) Uintah County, Pending; **UTU-9335064** (ROW-Roads) Uintah County, Pending	N/A	N/A	N/A

Dingell Act - Emery County Land Exchange

BLM Lands to Acquired

Updated 06/14/2023

PARCEL NO.	COUNTY	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERALS ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OIL & GAS ONLY ACRES	COAL ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	LAND TARGETS NOMINATED GROUP	RIGHTS OF WAYS	LEASES	WATER RIGHTS	MINING CLAIMS
Parcel 53M	Uintah	5S	19E	21	SLB&M	SE4SE4	0.00	40.00	0.00	0.00	0.00	Acquire Minerals Only	Lapoint East	Oil & Gas	N/A	N/A	N/A	N/A
Parcel 53M	Uintah	5S	19E	22	SLB&M	N2N2, SW4NW4, W2SW4	0.00	280.00	0.00	0.00	0.00	Acquire Minerals Only	Lapoint East	Oil & Gas	N/A	N/A	N/A	N/A
Parcel 53OG	Uintah	5S	19E	23	SLB&M	W2NE4, SE4NE4	0.00	0.00	0.00	120.00	0.00	Acquire Oil & Gas Only	Lapoint East	Oil & Gas	N/A	N/A	N/A	N/A
Parcel 53OG	Uintah	5S	19E	24	SLB&M	SW4NW4, W2SW4, SE4SW4	0.00	0.00	0.00	160.00	0.00	Acquire Oil & Gas Only	Lapoint East	Oil & Gas	N/A	N/A	N/A	N/A
Parcel 53OG	Uintah	5S	19E	25	SLB&M	N2NW4	0.00	0.00	0.00	80.00	0.00	Acquire Oil & Gas Only	Lapoint East	Oil & Gas	N/A	N/A	N/A	N/A
TOTAL							**1,605.00**	**395.00**	**0.00**	**480.00**	**0.00**							
Temple Springs																		
Parcel 54	Emery	25S	13E	10	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	**UTU-095561** (ROW-O&G Facilities) NAH Utah, LLC, Pending; **UTU-095837** (ROW-Roads) BLM, Perpetual	**UTU-093476** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	11	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	**UTU-095837** (ROW-Roads) BLM, Perpetual	**UTU-093475** (O&G) NAH Utah, LLC, Exp. 07/31/2030	**WR #93-1133** (Stockwatering) Flow 0.028 cfs.	N/A
Parcel 54	Emery	25S	13E	12	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	N/A	**UTU-093475** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	13	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	**UTU-095837** (ROW-Roads) BLM, Perpetual	**UTU-093479** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	14	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	**UTU-095837** (ROW-Roads) BLM, Perpetual	**UTU-093479** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A

Dingell Act - Emery County Land Exchange																	
BLM Lands to Acquired																	
Updated 06/14/2023																	
PARCEL NO.	**COUNTY**	**TWP**	**RNG**	**SEC**	**MERIDIAN**	**LEGAL DESCRIPTION**	**SURFACE & MINERALS ACRES**	**MINERALS ONLY ACRES**	**SURFACE ONLY ACRES**	**OIL & GAS ONLY ACRES**	**COAL ONLY ACRES**	**OWNERSHIP LAYER**	**AREA DESCRIPTION**	**LAND TARGETS NOMINATED GROUP**	**RIGHTS OF WAYS**	**LEASES**	**WATER RIGHTS**	**MINING CLAIMS**
Parcel 54	Emery	25S	13E	15	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	N/A	**UTU-093480** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	22	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	N/A	**UTU-093480** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	23	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	N/A	**UTU-093479** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
Parcel 54	Emery	25S	13E	24	SLB&M	All	640.00	0.00	0.00	0.00	0.00	Acquire Surface and Minerals	Temple Springs - Helium	Oil & Gas	N/A	**UTU-093479** (O&G) NAH Utah, LLC, Exp. 07/31/2030	N/A	N/A
TOTAL							**5,760.00**	**0.00**	**0.00**	**0.00**	**0.00**							

Dingell Act - Emery County Land Exchange

SITLA Lands to Convey

Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
JOHN WESLEY POWELL NATIONAL CONSERVATION AREA																			
SE101	Uintah	SCH	2S	24E	32	SLB&M	SE4	0.00	160.00	0.00	Give Up Minerals Only Includes Sand & Gravel	John Wesley Powell NCA	N/A	N/A	N/A	**GP 23075 -** Chivers Ranch, Inc., Exp. 06/30/2014	U. S. Confirmatory Patent 1208694	5/18/1960	10/18/1979
SE102	Uintah	SCH	2S	24E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 1730** (County Roads) Uintah County, Perpetual; **RIP 557** (Diamond Rim Bullhog Project) BLM, Exp 11/23/2034; **RIP 963** (Diamond Mountain Herbicide) BLM, Exp 10/24/2032; **GP 22598.12**, Billy F. Cook, Exp 06/30/2027; **GP 22598.A12**, Chivers Ranches, Inc., Exp 06/30/2027	**GP 22598.12 -** 175 Total AUMs - 4,178.53 Acres (Partial 15.3%) - 640.00 Acres and 27 AUMs in Emery County Exchange; **GP 22598.A12 -** 175 Total AUMs - 4,178.53 Acres (Partial 15.3%) - 640.00 Acres and 27 AUMs in Emery County Exchange	**45-1502** (Stockwatering) Flow Unevaluated; **45-1504** (Stockwatering) Flow Unevaluated	**GP 22598 -** Billy F. Cook, Exp 06/30/2012; **GP 22598.A -** Chivers Ranches. Inc.. Exp 06/30/2012	U. S. Confirmatory Patent 1208695	5/18/1960	4/11/1908
SE103	Uintah	SCH	2S	25E	32	SLB&M	LOTS 1(39.81), 2(39.42), 3(38.87), 4(38.19), N2, N2S2 [ALL]	636.29	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 1730** (County Roads) Uintah County, Perpetual; **RIP 557** (Diamond Rim Bullhog Project) BLM, Exp 11/23/2034; **RIP 963** (Diamond Mountain Herbicide) BLM, Exp 10/24/2032; **GP 22209.08**, Billy F. Cook, Exp 06/30/2023	**GP 22209.08 -** 64 Total AUMs - 636.29 Acres (Partial 100%) - 636.29 Acres and 64 AUMs in Emery County Exchange	N/A	**GP 22209 -** Billy F. Cook, Exp 06/30/2008	U. S. Confirmatory Patent 1215917	12/29/1960	6/4/1936
SE104	Uintah	SCH	2S	25E	36	SLB&M	LOTS 1(20.79), 2(40.00), 3(40.00), 4(20.00), 5(19.13), 6(40.00), 7(42.33), 8(42.26), 9(42.19), 10(42.12), 11(19.18), W2NE4, NW4, N2SW4, NW4SE4 [ALL]	728.00	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 1730** (County Roads) Uintah County, Perpetual; **ROW 909** (Access Road) U.S. Bureau of Sport Fisheries, Perpetual; **ROW 1136** (Powerline) Moon Lake Electric Association, Perpetual	N/A	**45-1515** (Stockwatering) Flow Unevaluated	**GP 21789 -** Lynn Siddoway, Exp. 06/30/2002; **GP 21814 -** Lands Coordinator Habitat, Exp. 06/30/2002; **GP 21814.02 -** Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-65-0198	5/13/1965	6/4/1936
SE105	Uintah	SCH	3S	25E	2	SLB&M	LOTS 1(51.79), 2(51.75), 3(51.73), 4(51.69), S2N2, S2 [ALL]	686.96	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ROW 909** (Access Road) U.S. Bureau of Sport Fisheries, Perpetual	N/A	**45-1536** (Stockwatering) Flow Unevaluated	**GP 21814 -** Lands Coordinator Habitat, Exp. 06/30/2002; **GP 21814.02 -** Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 1215917	12/29/1960	4/23/1906
SE106	Uintah	SCH	3S	25E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 1730** (County Roads) Uintah County, Perpetual; **PRED 792** (County Roads) Uintah County, Pending	N/A	**45-1606** (Stockwatering) Flow Unevaluated; **45-2751** (Stockwatering) Flow Unevaluated; **45-2773** (Stockwatering) Flow Unevaluated	**GP 21814 -** Lands Coordinator Habitat, Exp. 06/30/2002; **GP 21814.02 -** Division of Wildlife Resources, Exp. 06/24/2005	Acknowledgement of Title UTU 95500-FD	01/04/1896	4/23/1906
TOTAL								**3,331.25**	**160.00**	**0.00**									
MCCOY FLATS MOUNTAIN BIKE TRAIL SYSTEM																			

Dingell Act - Emery County Land Exchange

SITLA Lands to Convey

Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE107	Uintah	SCH	5S	20E	36	SLB&M	NE4, NE4SE4	200.00	0.00	0.00	Give Up Minerals and Surface	McCoy Flats	**GP 23289** - Holmes Bar NE Ranch, LLC, Exp 06/30/2026; **GP 21698.16** - Indian Trail Ranch, LLC, Exp 06/30/2031; **PRED 730** (County Roads) Uintah County, Perpetual; **PRED 775** (Non-motorized Trail - MOU) BLM, Perpetual.	**GP 23289** - 250 Total AUMs - 7,541.96 Acres (Partial 0.53%) - 40.00 Acres and 1.3 AUMs in Emery County Exchange; **GP 21698.16** - 170 Total AUMs - 2,417.96 Acres (Partial 6.6%) - 160.00 Acres and 11 AUMs in Emery County Exchange	N/A	**GP 21698** - Steven R. Pierson, Exp. 06/30/2001; **GP 20436** - Ernest Holmes DBA Bar NE Ranch; **GP 21698.01** - Indian Trail Ranch, LLC, Exp. 06/30/2016; **ROE 5576** (Temp Existing Access Road) Huffman Enterprises, Ex. 03/06/2012; **ML 46688** (OG&H Lease) Westport Oil & Gas Company LP, Exp. 10/31/2004; **ML 49748** (OG&AH Lease) QEP Energy Company, Exp. 05/31/2015; **ML 53332** (OG&AH) Robert L. Bayless, Producer LLC, Exp 02/28/2022; **MP 121** (Sand & Gravel Permit) Burdick Paving, Exp. 10/31/1998; **MP 203** (sand & Gravel Permit) Burdick Paving, Exp. 01/31/2004;	U. S. Confirmatory Patent 1226121	4/3/1962	1/13/1939
SE108	Uintah	SCH	5S	21E	21	SLB&M	S2NE4	80.00	0.00	0.00	Give Up Minerals and Surface	McCoy Flats	**ESMT 2471** (County Roads) - Uintah County, Perpetual, Pending; **GP 23289** - Holmes Bar NE Ranch, LLC, Exp 06/30/2026; **ML 53734 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **ML 90019 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **PRED 792** (County Roads) Uintah County, Pending; **RIP 461** (McCoy Flat Res) Holmes Bar NE Ranch, LLC, Exp 06/30/2032; **PRED 775** (Non-motorized Trail - MOU) BLM, Perpetual	**GP 23289** - 250 Total AUMs - 7,541.96 Acres (Partial 1.06%) - 80.00 Acres and 3 AUMs in Emery County Exchange	N/A	**GP 20436** - Ernest Holmes DBA Bar NE Ranch; **ML 49031** (OG&H Lease) King Enterprise Group Inc., Exp. 02/28/2013; **ML 53228** (OG&AH Lease) Eagleridge Energy LLC, Exp. 10/31/2017; **ML 90012** OBA (OG&AH Lease) Eagleridge Energy LLC, Exp. 12/31/2017; **ML 50553** (Bituminous Sands/Asphaltic Sands Lease) Land Enterprises Group Inc., Exp. 03/02/2015	In Lieu School 297	6/27/1966	4/24/1922
SE109	Uintah	SCH	5S	21E	22	SLB&M	S2NW4, SW4, W2SE4	320.00	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 2471** (County Roads) - Uintah County, Perpetual, Pending; **GP 23289** - Holmes Bar NE Ranch, LLC, Exp 06/30/2026; **ML 53734 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **ML 90019 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **PRED 792** (County Roads) Uintah County, Pending; **RIP 461** (McCoy Flat Res) Holmes Bar NE Ranch, LLC, Exp 06/30/2032; **PRED 775** (Non-motorized Trail - MOU) BLM, Perpetual	**GP 23289** - 250 Total AUMs - 7,541.96 Acres (Partial 4.2%) - 320.00 Acres and 10.5 AUMs in Emery County Exchange	N/A	**GP 20436** - Ernest Holmes DBA Bar NE Ranch, Exp. 08/11/2008; **GP 20965** - Nile Holmes & Sons, Exp. 08/11/2008; **ML 49031** (OG&H Lease) King Enterprise Group Inc., Exp. 02/28/2013; **ML 53229** (OG&AH Lease) Eagleridge Energy LLC, Exp. 10/31/2017; **ML 90012 OBA** (OG&AH Lease) Eagleridge Energy LLC, Exp. 12/31/2017; **ML 50553** (Bituminous Sands/Asphaltic Sands Lease) Land Enterprises Group Inc., Ex. 03/02/2015	In Lieu School 297	6/27/1966	4/24/1922

Dingell Act - Emery County Land Exchange

SITLA Lands to Convey

Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE110	Uintah	SCH	5S	21E	27	SLB&M	W2NW4, NW4SW4	120.00	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 2471** (County Roads) - Uintah County, Perpetual, Pending; **GP 23289** - Holmes Bar NE Ranch, LLC, Exp 06/30/2026; **ML 53737 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **ML 90019 OBA** (OG&AH) HooDoo Mining & Production Company, LLC, Exp 11/01/2024; **PRED 792** (County Roads) Uintah County, Pending; **PRED 775** (Non-motorized Trail - MOU) BLM, Perpetual	**GP 23289** - 250 Total AUMs - 7,541.96 Acres (Partial 1.59%) - 120.00 Acres and 4 AUMs in Emery County Exchange	N/A	**GP 20436** - Ernest Holmes DBA Bar NE Ranch, Exp. 08/11/2008; **GP 20965** - Nile Holmes & Sons, Exp. 08/11/2008; **ML 44029** (OG&H Lease) James O. Breene, Jr., Exp. 08/31/1998; **ML 48297** (OG&H Lease) Enertech Energy Inc., Exp. 06/30/2009; **ML 53231** (OG&AH Lease) Eagleridge Energy LLC, Exp. 10/31/2017; **ML 90012** OBA (OG&AH Lease) Eagleridge Energy LLC, Exp. 12/31/2017	In Lieu School 297	6/27/1966	4/24/1922
SE111	Uintah	SCH	5S	21E	32	SLB&M	LOTS 1(40.06), 2(40.69), 3(41.36), 4(41.51), N2, N2S2 [ALL]	643.62	0.00	0.00	Give Up Minerals and Surface	John Wesley Powell NCA	**ESMT 2471** (County Roads) - Uintah County, Perpetual, Pending; **GP 23289** - Holmes Bar NE Ranch, LLC, Exp 06/30/2026; **ROW 795** (Telephone Line) QWEST Corporation, Perpetual; **ESMT 1730** (County Roads) Uintah County, Perpetual; **RIP 462** (McCoy Flat Reservoir) Holmes Bar NE Ranch, LLC, Exp. 06/10/2032; **PRED 775** (Non-motorized Trail - MOU) BLM, Perpetual	**GP 23289** - 250 Total AUMs - 7,541.96 Acres (Partial 8.53%) - 643.62 Acres and 21 AUMs in Emery County Exchange	**45-2902** (Stockwatering) Flow Unevaluated; **45-2905** (Stockwatering) Flow Unevaluated	**GP 20436** - Ernest Holmes DBA Bar NE Ranch, Exp. 08/11/2008; **ROW 346** (Telephone Line) Mountain States Telephone & Telegraph Co., Perpetual; **ML 46689** (OG&H Lease) Westport Oil l& Gas Company LP, Exp. 10/31/2004; **ML 49751** (OG&AH Lease) QEP Energy Company, Exp. 05/31/2015; **ML 53333** (OG&AH) Robert L. Bayless, Producer LLC, Exp 02/28/2022;	U. S. Confirmatory Patent 1226121	4/3/1962	4/24/1922
TOTAL								**1,363.62**	**0.00**	**0.00**									
DESOLATION CANYON																			
SE112	Emery	SCH	16S	15E	2	SLB&M	LOTS 1(39.63), 2(39.69), 3(39.75), 4(39.81), S2N2, S2 [ALL]	638.88	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.65%) - 638.88 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 22897** - Dix & Jeanie Jensen, Exp. 06/30/2008; **GP 22897.08** - Dix & Jeanie Jensen, Exp. 06/30/2023	U. S. Confirmatory Patent 43-65-0032	8/20/1964	3/19/1904
SE113	Emery	SCH	16S	15E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.66%) - 640.00 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 22897** - Dix & Jeanie Jensen, Exp. 06/30/2008; **GP 22897.08** - Dix & Jeanie Jensen, Exp. 06/30/2023	U. S. Confirmatory Patent 43-65-0032	8/20/1964	3/19/1904
SE114	Emery	SCH	16S	15E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.66%) - 640.00 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 22897** - Dix & Jeanie Jensen, Exp. 06/30/2008; **GP 22897.08** - Dix & Jeanie Jensen, Exp. 06/30/2023	U. S. Confirmatory Patent 43-65-0032	8/20/1964	3/19/1904
SE115	Emery	SCH	16S	16E	2	SLB&M	LOTS 1(34.79), 2(34.83), 3(34.89), 4(34.93), S2N2, S2 [ALL]	619.44	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.45%) - 619.44 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 23099** - Dix & James T. Jensen c/o Butch Jensen, Exp. 06/30/2015	U. S. Confirmatory Patent 43-66-0010	7/2/1965	12/3/1963
SE116	Emery	SCH	16S	16E	5	SLB&M	LOT 4(40.19), SW4NW4 [LOT AKA NW4NW4]	0.00	80.19	0.00	Give Up Other Minerals Only Includes Sand & Gravel	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**GP 21432** - Himonas Brotehrs c/o Gust Himonas, Exp. 04/30/2000; **GP 21432.00** - Himonas Brothers c/o Gust Himonas, Exp. 08/02/2010	In Lieu School 129	12/27/1924	3/19/1904

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SE117	Emery	SCH	16S	16E	6	SLB&M	LOTS 1(40.14), 2(40.03) [AKA N2NE4]	0.00	80.17	0.00	Give Up Oil & Gas and Other Minerals Only Includes Sand & Gravel	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**GP 21432** - Himonas Brotehrs c/o Gust Himonas, Exp. 04/30/2000; **GP 21432.00** - Himonas Brothers c/o Gust Himonas, Exp. 08/02/2010	in Lieu School 129	12/27/1924	3/19/1904
SE118	Emery	SCH	16S	16E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 20234.09** - HooDoo Lands Holdings, LLC, Exp 06/30/2024	**GP 20234.09** - 125 Total AUMs - 2,839.95 Acres (Partial 22.5%) - 640.00 Acres and 28 AUMs in Emery County Exchange	N/A	**GP 21432** - Himonas Brotehrs c/o Gust Himonas, Exp. 04/30/2000; **GP 21432.00** - Himonas Brothers c/o Gust Himonas, Exp. 08/02/2010	U. S. Confirmatory Patent 43-66-0010	7/2/1965	12/3/1963
SE119	Emery	SCH	16S	16E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 20234.09** - HooDoo Lands Holdings, LLC, Exp 06/30/2024	**GP 20234.09** - 125 Total AUMs - 2,839.95 Acres (Partial 22.5%) - 640.00 Acres and 28 AUMs in Emery County Exchange	N/A	**GP 21432** - Himonas Brotehrs c/o Gust Himonas, Exp. 04/30/2000; **GP 21432.00** - Himonas Brothers c/o Gust Himonas, Exp. 08/02/2010	U. S. Confirmatory Patent 43-66-0010	7/2/1965	12/3/1963
SE120	Emery	SCH	16S	17E	16	SLB&M	W2	320.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 3.33%) - 320.00 Acres and 7 AUMs in Emery County Exchange	**90-1621** (Stockwatering) Flow Unevaluated	**GP 23099** - Dix & James T. Jensen c/o Butch Jensen, Exp. 06/30/2015	U. S. Confirmatory Patent 43-65-0223	6/3/1965	12/3/1963
SE121	Emery	SCH	16S	17E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	None	N/A	**90-1619** (Stockwatering) Flow Unevaluated	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-65-0223	6/3/1965	12/3/1963
SE122	Emery	SCH	17S	15E	2	SLB&M	LOTS 1(41.62), 2(41.98), 3(42.34), 4(42.70), S2N2, S2 [ALL]	648.64	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.75%) - 648.64 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 22897** - Dix & Jeanie Jensen, Exp. 06/30/2008; **GP 22897.08** - Dix & Jeanie Jensen, Exp. 06/30/2023	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE123	Emery	SCH	17S	15E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22445.09** - Glen Jensen, Exp 06/30/2024; **ROW 886** (Little Park Road) BLM, Perpetual	**GP 22445.09** - 21 Total AUMs - 3,632.20 Acres (Partial 17.6%) - 640.00 Acres and 4 AUMs in Emery County Exchange	N/A	**GP 22445** - Glen Jensen, Exp. 06/30/2009; **ML 50094** (OG&AH Lease) Charles K. Breland, Exp. 01/31/2011	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE124	Emery	SCH	17S	15E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE125	Emery	SCH	17S	15E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 50095** (OG&AH Lease) EOG Resoures, Inc., Exp. 03/02/2015	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963

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SE126	Emery	SCH	17S	16E	2	SLB&M	LOTS 1(39.49), 2(39.66), 3(39.84), 4(40.01), S2N2, S2 [ALL]	639.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.65%) - 639.00 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 22897** - Dix & Jeanie Jensen, Exp. 06/30/2008; **GP 22897.08** - Dix & Jeanie Jensen, Exp. 06/30/2023; **ML 48519** (OG&H Lease) Dennis D. Randleman, Exp. 08/31/2009	U. S. Confirmatory Patent 43-66-0010	7/2/1965	12/3/1963
SE127	Emery	SCH	17S	16E	27	SLB&M	SW4NW4, W2SE4	0.00	120.00	0.00	Give Up Oil & Gas and Other Minerals Only (Coal Reserved to BLM)	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**ML 48521** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	In Lieu School 116 In Lieu School 134	11/2/1923 9/18/1925	2/1/1916
SE128	Emery	SCH	17S	16E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036; **ROW 886** (Little Park Road) BLM, Perpetual	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 47959** (OG&H Lease Ronald Coulam, Exp. 06/28/1999; **ML 48522** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0069	9/23/1964	2/1/1916
SE129	Emery	SCH	17S	16E	36	SLB&M	W2	320.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036; **RIP 775** (Lower Range Creek Drift Fence) SITLA, Exp. 09/23/2038	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 1.76%) - 320.00 Acres and 5.6 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 47959** (OG&H Lease Ronald Coulam, Exp. 06/28/1999; **ML 48523** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009; **ML 48919** (Metalliferous Lease) A. Dan Holyoak, Exp. 08/29/2003; **ML 52268** (Metalliferous Lease) Samatha Irvine, Exp. 12/23/2013	U. S. Confirmatory Patent 43-65-0069	9/23/1964	2/1/1916
SE130	Emery	SCH	18S	15E	2	SLB&M	LOTS 1(39.27), 2(39.13), 3(38.99), 4(38.85), S2N2, S2 [ALL]	636.24	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 636.24 Acres and 21.4 AUMs in Emery County Exchange	**91-2514** (Stockwatering) Flow 0.011 cfs	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **RIP 183** (Wildlife Guzzler) Division of Wildlife Resources, Exp. 12/31/2004; **ML 50098** (OG&AH Lease) EOG Resources, Inc., Exp. 03/02/2015	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE131	Emery	SCH	18S	15E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 50099** (OG&AH Lease) Charles K. Breland, Exp. 01/31/2011	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963

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SE132	Emery	SCH	18S	15E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE133	Emery	SCH	18S	15E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	**91-2282** (Stockwatering) Flow Unevaluated	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 50100** (OG&AH Lease) Charles K. Breland, Exp. 01/31/2011	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE134	Emery	SCH	18S	16E	2	SLB&M	LOTS 1(40.27), 2(40.23), 3(40.17), 4(40.13), S2N2, S2 [ALL]	640.80	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.80 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 47958** (OG&H Lease) Ronald Coulam, Exp. 06/28/1999; **ML 48527** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0072	9/23/1964	6/16/1916
SE135A	Emery	SCH	18S	16E	10	SLB&M	NW4SE4	0.00	40.00	0.00	Give Up Oil & Gas and Other Minerals Only (Coal Reserved to BLM)	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**ML 47958** (OG&H Lease) Ronald Coulam, Exp. 06/28/1999; **ML 48528** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	In Lieu School 131	6//9/1925	6/16/1916
SE135B	Emery	SCH	18S	16E	10	SLB&M	NE4SW4	40.00	0.00	0.00	Give Up Surface, Oil & Gas, Other Minerals, and Sand & Gravel Only (Coal Reserved to BLM)	Desolation Canyon\Turtle Canyon	**GP 23245.21** – Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 0.022%) - 40.00 Acres and 0.134 AUMs in Emery County Exchange	**91-4404** (Stockwatering) Flow 0.011 cfs	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 47958** (OG&H Lease) Ronald Coulam, Exp. 06/28/1999; **ML 48528** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	In Lieu School 123	6/19/1924	6/16/1916
SE136	Emery	SCH	18S	16E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 47958** (OG&H Lease) Ronald Coulam, Exp. 06/28/1999; **ML 48529** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0072	9/23/1964	6/16/1916
SE137	Emery	SCH	18S	16E	31	SLB&M	LOT 3(37.68), SW4SE4 [AKA NW4SW4]	0.00	77.68	0.00	Give Up Oil & Gas and Other Minerals Only (Coal Reserved to BLM)	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**ML 48530** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	In Lieu School 95	9/14/1920	6/16/1916
SE138	Emery	SCH	18S	16E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23396** - T-N Ranching Company, LLC, Exp 06/30/2029	**GP 23396** - 198 Total AUMs - 9,604.96 Acres (Partial 6.66%) - 640.00 Acres and 13 AUMs in Emery County Exchange	N/A	**GP 23099** - Dix & James T. Jensen c/o Butch Jensen, Exp. 06/30/2015; **ML 48531** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0072	9/23/1964	6/16/1916

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SE139	Emery	SCH	18S	16E	36	SLB&M	W2W2	160.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 0.086%) - 160.00 Acres and 0.53 AUMs in Emery County Exchange	N/A	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 48532** (OG&H Lease) EOG Resources, Inc., Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0072	9/23/1964	6/16/1916
SE140	Emery	SCH	19S	15E	2	SLB&M	LOTS 1(34.25), 2(34.22), 3(34.20), 4(34.17), 5(40.00), 6(40.00), 7(40.00), 8(40.00), S2N2, S2 [ALL]	776.84	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 4.27%) - 776.84 Acres and 26.1 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 23245** - Division of Wildlife Resources. Exp.06/30/2021; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-66-0010	7/2/1965	5/6/1963
SE141	Emery	SCH	19S	15E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1961
SE142	Emery	SCH	19S	15E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036; **RIP 311** (Book Cliffs Face Guzzler Project) Utah Division of Wildlife Resources, Exp. 12/31/2024	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	**91-5151** (Stockwatering) 0.294 ACFT	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1961
SE143	Emery	SCH	19S	15E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1961
SE144	Emery	SCH	19S	16E	2	SLB&M	LOTS 1(33.40), 2(33.49), 3(33.57), 4(33.66), 5(40.00), 6(40.00), 7(40.00), 8(40.00), S2N2 [LOTS AKA FAR N2N2, N2N2]	454.12	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 2.5%) - 454.12 Acres and 15.3 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1947
SE145	Emery	SCH	19S	16E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1947

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PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE146	Emery	SCH	19S	16E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021	U. S. Confirmatory Patent 43-66-0002	7/1/1965	6/5/1947
SE147	Emery	SCH	20S	15E	2	SLB&M	LOTS 1(43.72), 2(43.79), 3(43.87), 4(43.94), S2N2, S2 [ALL]	655.32	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.6%) - 655.32 Acres and 22 AUMs in Emery County Exchange	N/A	**GP 22799** - Lands Coordinator Habitat, Exp. 04/30/200; **GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 50638** (OG&AH Lease) Entrada Enterprises LLC, Exp. 06/04/2012	U. S. Confirmatory Patent 43-66-0082	12/8/1965	9/6/1957
SE148	Emery	SCH	20S	15E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Desolation Canyon\Turtle Canyon	**GP 23245.21** - Division of Wildlife Resources, Exp 06/30/2036	**GP 23245.21** - 611 Total AUMs - 18,197.55 Acres (Partial 3.5%) - 640.00 Acres and 21.4 AUMs in Emery County Exchange	N/A	**GP 22799.00** - Division of Wildlife Resources, Exp. 06/24/2005; **GP 23245** - Division of Wildlife Resources, Exp.06/30/2021; **ML 50639** (OG&AH Lease) Entrada Enterprises LLC, Exp. 06/04/2012	U. S. Confirmatory Patent 43-66-0082	12/8/1965	5/6/1963
SE149	Emery	Deaf	20S	16E	3	SLB&M	LOTS 6(33.78), 7(1.10), 11(18.36), 12(35.15) [AKA PART OF W2SW4NE4, PART OF SE4NW4, PART OF NE4SW4, PART OF SW4SW4]	0.00	88.39	0.00	Give Up Minerals Only	Desolation Canyon\Turtle Canyon	None	N/A	N/A	**ML 50820** (OG&AH Lease) Twilight Resources, LLC, Exp. 07/16/2012	Deaf Clear List 10	12/1/1904	10/31/1899
TOTAL								**19,349.28**	**486.43**	**0.00**									
HORSESHOE CANYON																			
SE150A	Emery	SCH	23S	16E	36	SLB&M	LOTS 2(25.45), 3(37.85), S2NE4, W2, SE4 [LOTS AKA PART OF N2NE4]	623.30	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 22789.15** - Curtis & Kerry Rozman, Exp 06/30/2030; **GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033; **ESMT 1053** (OHV Access Road) Emery County Commission, Perpetual	**GP 22789.15** - 75 Total AUMs - 3,803.43 Acres (Partial 16.4%) - 623.30 Acres and 12 AUMs in Emery County Exchange; **GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.6%) - 623.30 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 22789** - Curtis & Kerry Rozman, Exp. 04/30/2000; **GP 22789.00** - Curtis & Kerry Rozman, Exp. 06/30/2015; **GP 22832** - Alan Gurney, Exp. 06/30/2001; **GP 23200** - Scott R. Gurney, Exp. 06/30/2018; **ROE 4857** (Bicycle Race) Don Mann, Exp. 07/05/2006; **ROE 7088** (Camping/Rocket Launch & Retrieval) Utah Rocket Club, Exp. 05/22/2022; **ML 50660** (OG&AH Lease) QEP Energy Company, Exp. 02/29/2012; **ML 52167** (OG&AH Lease) Rockies Standard Oil Company, LLC, Exp. 05/31/2017	U. S. Confirmatory Patent 43-66-0003	7/1/1965	10/31/1899

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SE150B	Grand	SCH	23S	16E	36	SLB&M	LOT 1[AKA NE4NE4NE4 CORNER]	0.90	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 22789.15** - Curtis & Kerry Rozman, Exp 06/30/2030	**GP 22789.15** - 75 Total AUMs - 3,803.43 Acres (Partial 0.024%) - 0.90 Acres and 0.018 AUMs in Emery County Exchange	N/A	**GP 22789** - Curtis & Kerry Rozman, Exp. 04/30/2000; **GP 22789.00** - Curtis & Kerry Rozman, Exp. 06/30/2015; **GP 23200** - Scott R. Gurney, Exp. 06/30/2018; **ROE 4857** (Bicycle Race) Don Mann, Exp. 07/05/2006; **ML 50660** (OG&AH Lease) QEP Energy Company, Exp. 02/29/2012; **ML 52167** (OG&AH Lease) Rockies Standard Oil Company, LLC, Exp. 05/31/2017	U. S. Confirmatory Patent 43-66-0003	7/1/1965	10/31/1899
SE151	Emery	SCH	24S	16E	2	SLB&M	LOTS 1(39.78), 2(39.79), 3(39.79), 4(39.80), S2N2, S2 [ALL]	639.16	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.7%) - 639.16 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 22832** - Alan Gurney, Exp. 06/30/2001; **GP 23200** - Scott R. Gurney, Exp. 06/30/2018; **ROE 4857** (Bicycle Race) Don Mann, Exp. 07/05/2006; **ML 50386** (OG&AH Lease) International Petroleum, LLC, Exp. 05/31/2016	U. S. Confirmatory Patent 43-64-0065	4/28/1964	3/14/1914
SE152	Emery	SCH	24S	16E	36	SLB&M	LOT 1(31.22), W2NE4, SE4NE4, W2, SE4 [ALL]	631.22	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.7%) - 631.22 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 50972** (OG&AH Lease) Retamco Operating, Inc., Exp. 08/31/2012	U. S. Confirmatory Patent 43-64-0065	4/28/1964	3/14/1914
																	U. S. Confirmatory Patent 43-64-0066	4/28/1964	3/14/1914
SE153	Emery	SCH	25S	16E	2	SLB&M	LOTS 1(44.69), 2(44.64), 3(44.58), 4(44.53), S2N2, S2 [ALL]	658.44	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.87%) - 658.44 Acres and 22 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 50974** (OG&AH Lease) Retamco Operating, Inc., Exp. 08/31/2012; **ML 52615** (OG&AH Lease) Anderson Oil LTD, Exp. 09/30/2018; **ML 51098** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-66-0090	1/10/1966	5/22/1935
SE154	Emery	SCH	25S	16E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033; **ML 53420 OBA** (OG&AH) Twin Bridges Resources LLC, Exp 07/31/2025 Primary Term Suspended; **ML 90022.OBA** (OG&AH) Twin Bridges Resources LLC, Exp 07/31/2025	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.73%) - 640.00 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 48836** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51098** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-66-0090	1/10/1966	5/22/1935
SE155	Emery	SCH	25S	17E	32	SLB&M	NE4NE4, SW4NW4, NW4SW4	120.00	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 0.89%) - 120.00 Acres and 4 AUMs in Emery County Exchange	N/A	**GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 51096** (Metalliferous Lease) Wave Uranium Holding Inc., Exp 01/05/2009	U. S. Confirmatory Patent 43-66-0090	1/10/1966	4/11/1956

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SE156	Emery	SCH	26S	I6E	2	SLB&M	LOTS 1(29.12), 2(29.10), 3(29.06), 4(29.04), S2N2, S2 [ALL]	596.32	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033; **ML 53189.OBA** (OG&AH) Twin Bridges Resources LLC, Exp 07/31/2025 Primary Term Suspended; **ML 90022.OBA** (OG&AH) Twin Bridges Resources LLC, Exp. 07/31/2025	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.4%) - 596.32 Acres and 20 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **RIP 34** (Drill Water Well) Stuart & Jared Johnson, Exp. 08/09/2015; **ML 48838** (OG&H Lease) Larry H. White, Exp. 01/22/2003; **ML 49129** (OG&H Lease) Steve Fisher, Exp. 07/30/2004; **ML 49668** (OG&H Lease) Saliz Corporation, Exp. 04/27/2007; **ML 51097** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	6/14/1955
SE157A	Emery	SCH	26S	I6E	32	SLB&M	N2, N2S2, PART OF SW4SW4(32.52), PART OF SE4SW4(32.09), PART OF SW4SE4(32.35), PART OF SE4SE4(32.85)	609.81	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033; **PRED 768** (County Roads) Emery County, Perpetual; **ML 53321.OBA** (OG&AH) Temple Springs DE LLC, Exp 07/31/2023; **ML 90024 OBA** (OG&AH) Temple Springs DE LLC, Exp. 07/31/2023	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 4.5%) - 609.81 Acres and 20 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 48840** (OG&AH Lease) Larry J. White, Exp. 01/22/2003; **ML 51097.A** (Metalliferous Lease) American Nuclear Fuels II LLC, Exp., 01/04/2010; **ML 90015 OBA** (OG&AH) Tacitus Corporation, Exp 03/31/2024	U. S. Confirmatory Patent 43-65-0207	5/24/1965	6/14/1955
SE157B	Wayne	SCH	26S	I6E	32	SLB&M	PART OF SW4SW4(7.48), PART OF SE4SW4(7.91), PART OF SW4SE4(7.65), PART OF SE4SE4(7.15)	30.19	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033; **ML 53321.OBA** (OG&AH) Temple Springs DE LLC, Exp 07/31/2023; **ML 90024 OBA** (OG&AH) Temple Springs DE LLC, Exp. 07/31/2023	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 0.22%) - 30.19 Acres and 1 AUMs in Emery County Exchange	N/A	**GP 23037** - Scott R. Gurney, Exp. 06/30/2012; **GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 48840** (OG&AH Lease) Larry J. White, Exp. 01/22/2003; **ML 51097.A** (Metalliferous Lease) American Nuclear Fuels II LLC, Exp., 01/04/2010; **ML 90015 OBA** (OG&AH) Tacitus Corporation, Exp 03/31/2024	U. S. Confirmatory Patent 43-65-0207	5/24/1965	6/14/1955
SE158A	Emery	SCH	26S	I6E	36	SLB&M	N2, N2S2, PART SW4SW4(35.22), PART SE4SW4(35.22), PART SW4SE4(35.22), PART SE4SE4(35.22)	620.88	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	None	N/A	N/A	**ML 48841** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51097** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	6/14/1955
SE158B	Wayne	SCH	26S	I6E	36	SLB&M	PART SW4SW4(4.78), PART SE4SW4(4.78), PART SW4SE4(4.78), PART SE4SE4(4.78)	19.12	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	None	N/A	N/A	**ML 48841** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51097** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	6/14/1955
SE159	Emery	SCH	26S	I7E	16	SLB&M	SW4SW4	40.00	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	**GP 23200.18** - Scorup Cattle Co., LLC, Exp 06/30/2033	**GP 23200.18** - 445 Total AUMs - 13,533.40 Acres (Partial 0.3%) - 40.00 Acres and 1 AUMs in Emery County Exchange	N/A	**GP 23037.12** - Scott R. Gurney, Exp. 06/30/2027; **ML 48842** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51099** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	4/11/1956

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SE160A	Emery	SCH	26S	17E	32	SLB&M	W2NW4, NW4SW4, PART SW4SW4(33.12)	153.12	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	None	N/A	N/A	**ML 48842** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51099** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	4/11/1956
SE160B	Wayne	SCH	26S	17E	32	SLB&M	PART SW4SW4(6.88)	6.88	0.00	0.00	Give Up Minerals and Surface	Horseshoe Canyon	None	N/A	N/A	**ML 48842** (OG&H Lease) Larry J. White, Exp. 01/22/2003; **ML 51099** (Metalliferous Lease) Wave Uranium Holding Inc., Exp. 01/05/2009	U. S. Confirmatory Patent 43-65-0207	5/24/1965	4/11/1956
TOTAL								**5,389.34**	**0.00**	**0.00**									
SAN RAFAEL SWELL																			
SE161	Emery	SCH	19S	10E	2	SLB&M	LOTS 1(49.89), 2(49.92), 3(49.94), 4(49.97), S2N2, S2 [ALL]	679.72	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20700.11** - Buckhorn Cattle Group, Exp 06/30/2026; **ROW 1242** (Transmission Line) Pacificorp DBA Rocky Mountain Power, Perpetual; **PRED 768** (County Roads) Emery County, Perpetual; **RIP 640** (Pipeline & Trough for Stock Watering) Wayde S. Nielsen & Tracy K. Nielson, Exp 11/15/2035; **RIP 695** (Buckhorn Pipeline) Wayde S. Nielsen, Exp 06/18/2037	**GP 20700.11** - 110 Total AUMs - 2,599.72 Acres (Partial 26.15%) - 679.72 Acres and 29 AUMs in Emery County Exchange	N/A	**GP 20700** - Buckhorn Cattle Group c/o Sherry C. Winder, Exp. 06/30/2011; **ML 50169** (OG&AH Lease) Craig S. Settle, Exp. 01/31/2011	U. S. Confirmatory Patent 43-65-0202	5/24/1965	1/23/1912
SE162	Emery	SCH	19S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21169.13** - Wayde S. Nielsen, Exp 06/30/2028; **PRED 17** (Protect an Endanger Plant) SITLA, Perpetual; **SULA 1886** (Recreational Trail) BLM, Exp 10/31/2023; **ESMT 1570** (County Class "B" Roads) Emery County, Perpetual	**GP 21169.13** - 47 Total AUMs - 1,333.68 Acres (Partial 48%) - 640.00 Acres and 23 AUMs in Emery County Exchange	N/A	**GP 21169** - Wayde S. Nielsen, Exp. 06/30/2013	U. S. Confirmatory Patent 43-65-0202	5/24/1965	1/23/1912

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SE163	Emery	SCH	19S	11E	28	SLB&M	N2, E2SE4	400.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21333.14** - SACCO Brothers Land & Livestock Co., Exp 06/30/2029; **ESMT 1303** (OHV Trail System) Emery County, Exp 01/31/2028	**GP 21333.14** - 507 Total AUMs - 9,802.24 Acres (Partial 4.1%) - 400.00 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 21333** - Boyd L. Marsing, Exp. 04/30/1999; **GP 21333.99** - Sacco Brothers Land & Livestock Co., Exp. 06/30/2014; **ROE 4384** (Commercial Recreational Use) Southeastern Utah OHV Club, Exp. 01/28/2002; **ROE 4661** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2005; **ROE 4756** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2006; **ROE 4881** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2007; **ROE 4996** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 12/31/2007	In Lieu School 290	8/31/1964	1/23/1912
SE164	Emery	SCH	19S	11E	29	SLB&M	N2NE4	80.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21333.14** - SACCO Brothers Land & Livestock Co., Exp 06/30/2029	**GP 21333.14** - 507 Total AUMs - 9,802.24 Acres (Partial 1%) - 80.00 Acres and 5 AUMs in Emery County Exchange	N/A	**GP 21333** - Boyd L. Marsing, Exp. 04/30/1999; **GP 21333.99** - Sacco Brothers Land & Livestock Co., Exp. 06/30/2014	In Lieu School 290	8/31/1964	1/23/1912
SE165	Emery	SCH	19S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20700.11** - Buckhorn Cattle Group, Exp 06/30/2026; **PRED 17** (Protect an Endanger Plant) SITLA, Perpetual	**GP 20700.11** - 110 Total AUMs - 2,599.72 Acres (Partial 24.62%) - 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20700** - Buckhorn Cattle Group c/o Sherry C. Winder, Exp. 06/30/2011	U. S. Confirmatory Patent 43-65-0202	5/24/1965	1/23/1912
SE166	Emery	SCH	19S	11E	33	SLB&M	E2NE4	80.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21333.14** - SACCO Brothers Land & Livestock Co., Exp 06/30/2029	**GP 21333.14** - 507 Total AUMs - 9,802.24 Acres (Partial 1%) - 80.00 Acres and 5 AUMs in Emery County Exchange	N/A	**GP 21333** - Boyd L. Marsing, Exp. 04/30/1999; **GP 21333.99** - Sacco Brothers Land & Livestock Co., Exp. 06/30/2014	In Lieu School 290	8/31/1964	1/23/1912

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PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE167	Emery	SCH	19S	11E	34	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21333.14** - SACCO Brothers Land & Livestock Co., Exp 06/30/2029; **ESMT 1303** (OHV Trail System) Emery County, Exp 01/31/2028	**GP 21333.14** - 507 Total AUMs - 9,802.24 Acres (Partial 6.5%) - 640.00 Acres and 33 AUMs in Emery County Exchange	N/A	**GP 21333** - Boyd L. Marsing, Exp. 04/30/1999; **GP 21333.99** - Sacco Brothers Land & Livestock Co., Exp. 06/30/2014; **ROE 4384** (Commercial Recreational Use) Southeastern Utah OHV Club, Exp. 01/28/2002; **ROE 4661** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2005; **ROE 4756** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2006; **ROE 4881** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2007; **ROE 4996** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 12/31/2007	In Lieu School 290	8/31/1964	1/23/1912
SE168	Emery	SCH	19S	11E	35	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21333.14** - SACCO Brothers Land & Livestock Co., Exp 06/30/2029; **ESMT 1303 (**OHV Trail System) Emery County, Exp 01/31/2028	**GP 21333.14** - 507 Total AUMs - 9,802.24 Acres (Partial 6.5%) - 640.00 Acres and 33 AUMs in Emery County Exchange	N/A	**GP 21333** - Boyd L. Marsing, Exp. 04/30/1999; **GP 21333.99** - Sacco Brothers Land & Livestock Co., Exp. 06/30/2014; **ROE 4756** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2006; **ROE 4881** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2007	In Lieu School 290 In Lieu School 258	8/31/1964 7/30/1962	1/23/1912
SE169	Emery	SCH	19S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21095.14** - Bar Backward C Group, LLC, Exp 06/30/2029; **ESMT 1303** (OHV Trail System) Emery County, Exp 01/31/2028	**GP 21095.14** - 1,188 Total AUMs - 29,602.89 Acres (Partial 2.2%) - 640.00 Acres and 26 AUMs in Emery County Exchange	N/A	**GP 21095** - Betty Smith, Exp. 06/30/2014	U. S. Confirmatory Patent 43-65-0202	5/24/1965	1/23/1912

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SE170	Emery	SCH	19S	I2E	31	SLB&M	LOTS 1(40.00), 2(33.95), 3(33.96), 4(40.00), 5(40.00), 6(33.98), 7(33.99), 8(40.00), E2, E2W2 [ALL]	775.88	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20513.10** - Lost Homestead Grazing Alliance, LLC, Exp 06/30/2025; **ROE 7031** (Wilderness Therapy) Elements Wilderness Program, Exp 09/30/2022; **ESMT 1303** (OHV Trail System) Emery County, Exp 01/31/2028	**GP 20513.10** - 95 Total AUMs - 3,783.00 Acres (Partial 20.5%) 775.88 Acres and 19.5 AUMs in Emery County Exchange	N/A	**GP 20513** - Lost Homestead Grazing Alliance, LLC, Exp. 06/30/2010; **ROE 4384** (Commercial Recreational Use) Southeastern Utah OHV Club, Exp. 01/28/2002; **ROE 4756** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2006; **ROE 4881** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 01/31/2007; **ROE 4996** (Commercial ATV Poker Rides) Southeastern Utah OHV Club, Exp. 12/31/2007; **ROE 5253** (Commercial Camping & Hiking) Elements Wilderness Program, Exp. 10/31/2009; **ROE 5390** (Commercial Tours) Elements Wilderness Program, Exp. 10/31/2010; **ROE 5541** (Commercial Camping & Hiking) Elements Wilderness Program. Exp. 10/31/2011; **ROE 5683** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2012; **ROE 5824** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2013; **ROE 5985** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2014;	In Lieu School 290	8/31/1964	2/24/1933
																ROE 6105 (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2015; **ROE 6246** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2016; **ROE 6371** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2017; **ROE 6500** (Wilderness Therapy) Elements Program, Exp. 10/31/2018; **ROE 6652** (Wilderness Therapy) Elements Wilderness Program, Exp. 08/31/2019; **ROE 6771** (Wilderness Therapy) Elements Wilderness Program, Exp. 09/30/2020; **ROE 6892** (Wilderness Therapy) Elements Wilderness Program, Exp. 09/30/2021	In Lieu School 258	7/30/1962	

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SE171	Emery	SCH	19S	I2E	32	SLB&M	W2, W2SE4	400.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21095.14** - Bar Backward C. Group, LLC, Exp 06/30/2029; **ROE 7031** (Wilderness Therapy) Elements Wilderness Program, Exp 09/30/2022; **ESMT 1303** (OHV Trail System) Emery County, Exp 01/31/2028; **PRED 768** (County Roads) Emery County, Perpetual	**GP 21095.14** - 1,188 Total AUMs - 29,602.89 Acres (Partial 1.35%) - 400.00 Acres and 16 AUMs in Emery County Exchange	N/A	**GP 21095** - Betty Smith, Exp. 06/30/2014; **ROE 4384** (Commercial Recreational Use) Southeastern Utah OHV Club, Exp. 01/28/2002; **ROE 4756** (Commercial ATV Poker Rides) Southeastern Utah OHV Club c/o Mark H. Williams, Exp. 01/31/2006; **ROE 4881** (Commercial ATV Poker Rides) Southeastern Utah OHV Club c/o Mark H. Williams, Exp. 01/31/2007; **ROE 4996** (Commercial ATV Poker Rides) Southeastern Utah OHV Club c/o Mark H. Williams, Exp. 12/31/2007; **ROE 5253** (Commercial Camping & Hiking) Elements Wilderness Program, Exp. 10/31/2009; **ROE 5390** (Commercial Tours) Elements Wilderness Program, Exp. 10/31/2010; **ROE 5541** (Commercial Camping and Hiking) Elements Wilderness Program, Exp. 10/31/2011; **:ROE 5683** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2012; **ROE 5824** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/831/2013; **ROE 5985** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2014; **ROE 6105** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2015; **ROE 6182** (Commercial Filming) Gowdy Productions c/o Pamela Tomlin, Exp. 05/17/2015; **ROE 6246** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2016; **ROE 6371** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2017; **ROE 6500** (Wilderness Therapy) Elements Wilderness Program, Exp. 10/31/2018; **ROE 6652** (Wilderness Therapy) Elements Wilderness Program, Exp. 08/31/2019; **ROE 6771** (Wilderness Therapy) Elements Wilderness Program, Exp. 09/30/2020	U. S. Confirmatory Patent 43-65-0155	3/26/1965	2/24/1933

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SE172	Emery	SCH	20S	9E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20243.09** - Jeffs Living Trust or Shaun R. Jeffs, Exp 06/30/2024; **GP 21994.17** - Brett & Jaclyn Jeffs, Exp 06/30/2032	**GP 20243.09** - 47 Total AUMs - 2,605.00 Acres (Partial 24.57%) - 640.00 Acres and 12 AUMs in Emery County Exchange: **GP 21994.17** - 47 Total AUMs - 2,605.00 Acres (Partial 24.57%) - 640.00 Acres and 12 AUMs in Emery County Exchange	N/A	**GP 20243** - J. Ray Jeffs, Exp. 06/30/2009; **GP 21994** - A. Lee Jeff, J. Ray Jeffs, & R. Jay Jeffs, Exp. 06/30/2002; **GP 21994.02** - Archie Lee Jeffs Family Trust Dated April 9, 1988, Exp. 06/30/2017; **ML 50636** (OG&AH Lease) Pioneer Oil and Gas Attn: Greg Colton, Exp. 04/23/2012; **ML 52301**(OG&AH Lease) Castle Valley Holdings, LLC, Exp. 02/21/2017	U. S. Confirmatory Patent 43-65-0238	6/15/1965	5/9/1918
SE173	Emery	SCH	20S	10E	2	SLB&M	LOTS 1(13.61), 2(13.49), 3(13.35), 4(13.23), 5(40.00), 6(40.00), 7(40.00), 8(40.00), S2N2, S2 [ALL]	693.68	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21169.13** - Wayde S. Nielsen, Exp 06/30/2028; **PRED 17** (Protect an Endanger Plant) SITLA. Perpetual: **SULA 1886** (Recreational Trail) BLM, Exp 10/31/2023; **ESMT 1570** (County Class "B" Roads) Emery County, Perpetual; **ROW 2645** (Access Road) BLM, Perpetual	**GP 21169.13** - 47 Total AUMs - 1,333.68 Acres (Partial 52%) - 693.68 Acres and 25 AUMs in Emery County Exchange	N/A	**GP 21169** - Wayde S. Nielsen, Exp. 06/30/2013; **ML 52526** (OG&AH Lease) International Petroleum, LLC, Exp. 09/11/2017	U. S. Confirmatory Patent 43-65-0220	6/3/1965	10/28/1920
SE174	Emery	SCH	20S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20243.09** - Jeffs Living Trust or Shaun R. Jeffs, Exp 06/30/2024; **GP 21994.17** - Brett & Jaclyn Jeffs, Exp 06/30/2032	**GP 20243.09** - 47 Total AUMs - 2,605.00 Acres (Partial 24.57%) - 640.00 Acres and 12 AUMs in Emery County Exchange; **GP 21994.17** - 47 Total AUMs - 2,605.00 Acres (Partial 24.57%) - 640.00 Acres and 12 AUMs in Emery County Exchange	N/A	**GP 20243** - J. Ray Jeffs, Exp. 06/30/2009; **GP 21994.02** - Archie Lee Jeffs Family Trust Dated April 9, 1988, Exp. 06/30/2017; **GP 22384** - Jeffs Family Revocable Farm Trust, Exp. 06/30/2008	U. S. Confirmatory Patent 43-65-0231	6/9/1965	10/28/1920
SE175	Emery	SCH	20S	10E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22188.17** - Jesse Jensen, Exp 06/30/2032	**GP 22188.17** - 36 Total AUMs - 2,791.58 Acres (Partial 23%) - 640.00 Acres and 8 AUMs in Emery County Exchange	N/A	**GP 22188** - Russel H. & Darrell F. Jensen, Exp 06/30/2002; **GP 22188.02** - Russel H. Jensen, Exp. 06/30/2017; **ROE 6503** (Outdoor Education) High Mountain Institute; Exp. 11/02/2017	U. S. Confirmatory Patent 43-65-0231	6/9/1965	10/28/1920
SE176	Emery	SCH	20S	10E	36	SLB&M	W2	320.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22188.17** - Jesse Jensen, Exp 06/30/2032	**GP 22188.17** - 36 Total AUMs - 2,791.58 Acres (Partial 11.46%) - 320.00 Acres and 4 AUMs in Emery County Exchange	N/A	**GP 22188** - Russel H. & Darrell F. Jensen, Exp 06/30/2002; **GP 22188.02** - Russel H. Jensen, Exp. 06/30/2017	U. S. Confirmatory Patent 43-65-0231	6/9/1965	10/28/1920
SE177	Emery	SCH	20S	11E	2	SLB&M	LOTS 1(14.84), 2(14.22), 3(13.62), 4(13.00), 5(40.00), 6(40.00), 7(40.00), 8(40.00), S2N2, S2 [ALL]	695.68	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20575.10** - Thomas and Teri McElprang, Exp 06/30/2025	**GP 20575.10** - 25 Total AUMs - 695.68 Acres (Partial 100%) - 695.68 Acres and 25 AUMs in Emery County Exchange	N/A	**GP 20575** -Kenn Clyde Kofford, Exp 06/30/2010	U. S. Confirmatory Patent 43-65-0231	6/9/1965	2/17/1942

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SE178	Emery	SCH	20S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.55%) - 640.00 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 21678** - John C. Nielson & Sons, Exp. 06/30/2001; **GP 21678.01** - Nielson Ranches, LLC, Exp. 06/30/2016; **ML 50903** (Metalliferous Lease) Hartmut W. Baitis, Exp. 07/27/2009; **ML 51896** (Metalliferous Lease) Gregory L. Hunt, Exp. 04/23/2012; **ML 52267** (Metalliferous Lease) Samatha Irvine, Exp. 12/23/2013	U. S. Confirmatory Patent 43-65-0231	6/9/1965	2/17/1942
SE179	Emery	SCH	20S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22863.22** - William Allred, Exp 06/30/2037; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElprang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 7.54 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 5.1 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 21 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 2.5 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 9.7 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 2.5 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 13 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 1.5 AUMs in Emery County Exchange	N/A	**GP 22863.07** - William Allred, Exp 06/30/2022; **GP 22863.07A** - William Allred, Exp 06/30/2022; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElprang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **ML 52151** (OG&AH Lease) Palo Petroleum, Inc., Exp. 07/28/2014; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022	U. S. Confirmatory Patent 43-65-0231 U. S. Confirmatory Patent 43-71-0002	6/9/1965 7/1/1970	2/17/1942
SE180	Emery	SCH	20S	12E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20513.10** - Lost Homestead Grazing Alliance, LLC, Exp 06/30/2025	**GP 20513.10** - 95 Total AUMs - 3,783.00 Acres (Partial 16.9%) 640.00 Acres and 16 AUMs in Emery County Exchange	N/A	**GP 20513** - Lost Homestead Grazing Alliance, LLC, Exp. 06/30/2010; **ML 52153** (OG&AH Lease) Palo Petroleum, Inc., Exp. 07/28/2014	U. S. Confirmatory Patent 43-65-0231	6/9/1965	2/17/1942

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SE181	Emery	SCH	20S	12E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20513.10** - Lost Homestead Grazing Alliance, LLC, Exp 06/30/2025	**GP 20513.10** - 95 Total AUMs - 3,783.00 Acres (Partial 8.46%) 320.00 Acres and 8 AUMs in Emery County Exchange	N/A	**GP 22863** - Virl E. Winder c/o Emma L. Weber, Exp. 06/30/2007; **GP 20513** - Lost Homestead Grazing Alliance, LLC, Exp. 06/30/2010; **ML 43769** (OG&H Lease) Texaco Exploration & Production Inc., Exp. 02/28/1998	U. S. Confirmatory Patent 43-65-0231 U. S. Confirmatory Patent 43-70-0023	6/9/1965 4/15/1970	2/17/1942
SE182	Emery	SCH	20S	13E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20513.10** - Lost Homestead Grazing Alliance, LLC, Exp 06/30/2025	**GP 20513.10** - 95 Total AUMs - 3,783.00 Acres (Partial 16.9%) 640.00 Acres and 16 AUMs in Emery County Exchange	N/A	**GP 20513** - Lost Homestead Grazing Alliance, LLC, Exp. 06/30/2010; **ML 43770** (OG&H Lease) Texaco Exploration & Production Inc., Exp. 02/28/1998	U. S. Confirmatory Patent 43-66-0082	12/8/1965	12/4/1962
SE183	Emery	SCH	20S	13E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20388.09** - Clyde or Darlene Magnuson, Exp 06/30/2024	**GP 20388.09** - 59 Total AUMs - 1,640.68 Acres (Partial 39%) 640.00 Acres and 23 AUMs in Emery County Exchange	N/A	**GP 20388** - Clyde or Darlene Magnuson, Exp. 06/30/2009; **ML 43770** (OG&H Lease) Texaco Exploration & Production Inc., Exp. 02/28/1998	U. S. Confirmatory Patent 43-66-0082 U. S. Confirmatory Patent 43-71-0001	12/8/1965 7/1/1970	12/4/1962
SE184	Emery	SCH	20S	13E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21095.14** - Bar Backward C Group, LLC, Exp 06/30/2029	**GP 21095.14** - 1,188 Total AUMs - 29,602.89 Acres (Partial 2.16%) - 640.00 Acres and 25.66 AUMs in Emery County Exchange	N/A	**GP 20749** - Wayne G. Smith, Exp. 05/13/1998; **GP 21095** - Betty Smith, Exp. 06/30/2014	U. S. Confirmatory Patent 43-66-0081	11/22/1965	10/2/1947
SE185	Emery	SCH	20.5S	13E	32	SLB&M	LOTS 1(49.43), 2(37.03), 3(37.09), 4(37.13), S2S2 [ALL]	320.68	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20388.09** - Clyde or Darlene Magnuson, Exp 06/30/2024	**GP 20388.09** - 59 Total AUMs - 1,640.68 Acres (Partial 19.55%) 320.68 Acres and 11.5 AUMs in Emery County Exchange	N/A	**GP 20388** - Clyde or Darlene Magnuson, Exp. 06/30/2009	U. S. Confirmatory Patent 43-65-0150	3/26/1965	12/4/1962
SE186	Emery	SCH	20.5S	13E	36	SLB&M	LOTS 1(11.74), 2(11.76), 3(11.80), 4(11.82), S2 [ALL]	367.12	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20513.10** - Lost Homestead Grazing Alliance, LLC, Exp 06/30/2025	**GP 20513.10** - 95 Total AUMs - 3,783.00 Acres (Partial 9.7%) 367.12 Acres and 9.2 AUMs in Emery County Exchange	N/A	**GP 20513** - Lost Homestead Grazing Alliance, LLC, Exp. 06/30/2010	U. S. Confirmatory Patent 43-65-0150	3/26/1965	12/4/1962
SE187	Emery	SCH	21S	9E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22362.08** - Kash Winn, Exp 06/30/2023	**GP 22362.08** - 84 Total AUMs - 2,479.27 Acres (Partial 25.8%) 640.00 Acres and 21.7 AUMs in Emery County Exchange	N/A	**GP 22362** - Keith D. Winn, Exp. 06/30/2008	U. S. Confirmatory Patent 43-65-0148	3/26/1965	8/16/1957
SE188	Emery	SCH	21S	10E	2	SLB&M	LOTS 1(18.05), 2(17.95), 3(17.85), 4(17.75), 5(40.00), 6(40.00), 7(40.00), 8(40.00), 9(40.00), 10(40.00), 11(40.00), 12(40.00), S2N2, S2 [ALL]	871.60	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22188.17** - Jesse Jensen, Exp 06/30/2032	**GP 22188.17** - 36 Total AUMs - 2,791.58 Acres (Partial 31.22%) 871.60 Acres and 11.24 AUMs in Emery County Exchange	N/A	**GP 22188** - Russel H. & Darrell F. Jensen, Exp. 06/30/2002; **GP 22188.02** - Russel H. Jensen, Exp. 06/30/2017; **ROE 6503** (Outdoor Education) High Mountain Institute, Exp. 11/02/2017	U. S. Confirmatory Patent 43-65-0148	3/26/1965	6/11/1956
SE189	Emery	SCH	21S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22188.17** - Jesse Jensen, Exp 06/30/2032	**GP 22188.17** - 36 Total AUMs - 2,791.58 Acres (Partial 23%) 640.00 Acres and 8 AUMs in Emery County Exchange	N/A	**GP 22188** - Russel H. & Darrell F. Jensen, Exp. 06/30/2002; **GP 22188.02** - Russel H. Jensen, Exp. 06/30/2017	U. S. Confirmatory Patent 43-65-0148	3/26/1965	6/11/1956
SE190	Emery	SCH	21S	10E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22362.08** - Kash Winn, Exp 06/30/2023	**GP 22362.08** - 84 Total AUMs - 2,479.27 Acres (Partial 25.8%) 640.00 Acres and 21.7 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon McElprang, Exp. 06/30/2011	U. S. Confirmatory Patent 43-65-0148	3/26/1965	6/11/1956
SE191	Emery	SCH	21S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.55%) 640.00 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 21293** - John C. Nielson & Sons, Exp. 04/30/1999; **GP 21293.99** - Nielson Ranches, LLC, Exp. 06/30/2014	U. S. Confirmatory Patent 43-65-0148	3/26/1965	6/11/1956

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SE192	Emery	SCH	21S	11E	2	SLB&M	LOTS 1(17.01), 2(17.03), 3(17.05), 4(17.07), 5(40.00), 6(40.00), 7(40.00), 8(40.00), 9(40.00), 10(40.00), 11(40.00), 12(40.00), S2N2, S2 [ALL]	868.16	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ROW 787** (Livestock Reservoir) BLM, Perpetual; **GP 22863.22** - William Allred, Exp 06/30/2037; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 22.3%) - 868.16 Acres and 10.26 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 6.9 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 28 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 3.3 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 13.13 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 3.3 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 17.6 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 22.26%) - 868.16 Acres and 2 AUMs in Emery County Exchange	N/A	**GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022; **GP 22863.07A** -William Allred, Exp 06/30/22; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022; **ML 52157** (OG&AH Lease) Palo Petroleum, Inc., Exp 07/28/2014	U. S. Confirmatory Patent 43-65-0238	6/15/1965	6/11/1956
SE193	Emery	SCH	21S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.55%) 640.00 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 21293** - John C. Nielson & Sons, Exp. 04/30/1999; **GP 21293.99** - Nielson Ranches, LLC, Exp. 06/30/2014	U. S. Confirmatory Patent 43-65-0238	6/15/1965	6/11/1956
SE194	Emery	SCH	21S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.55%) 640.00 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 21293** - John C. Nielson & Sons, Exp. 04/30/1999; **GP 21293.99** - Nielson Ranches, LLC, Exp. 06/30/2014	U. S. Confirmatory Patent 43-65-0238	6/15/1965	6/11/1956

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SE195	Emery	SCH	21S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027; **GP 22863.22** - William Allred, Exp 06/30/2037 ; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 5.1%) - 240.00 Acres and 16 AUMs in Emery County Exchange; **GP 22863.22-** 46 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 4.74 AUMs in Emery County Exchange; **GP 22863.22A** - 23 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 2.4 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 13 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 1.6 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 6.1 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 1.6 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 8 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 10.3%) - 400.00 Acres and 1 AUMs in Emery County Exchange	N/A	**GP 21293** - John C. Nielson & Sons, Exp. 04/30/1999; **GP 21293.99** - Nielson Ranches, LLC, Exp. 06/30/2014; **GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022 ; **GP 22863.07A** -William Allred, Exp 06/30/22; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022; **TA 838** (Needle & Thread Seed Collection) Maple Leaf Company, Exp. 07/31/2010; **MP 52922 MP** (Industrial Sands) Randall J. Betsill, Exp. 08/31/2016	U. S. Confirmatory Patent 43-65-0238	6/15/1965	6/11/1956

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SE196	Emery	SCH	21S	12E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22863.22** - William Allred, Exp 06/30/2037 ; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 7.54 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 5.1 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 20.7 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 2.5 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 9.7 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 2.5 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 13 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 16.4%) - 640.00 Acres and 1.5 AUMs in Emery County Exchange	N/A	**GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022 ; **GP 22863.07A** -William Allred, Exp 06/30/22; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J**- Nielson Ranches, LLC, Exp 06/30/2022	U. S. Confirmatory Patent 43-65-0067	9/23/1964	6/27/1956

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SE197	Emery	SCH	21S	12E	32	SLB&M	LOTS 1(23.34), 2(23.36), 3(23.40), 4(23.42), E2 [ALL]	413.52	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads)- Emery County, Perpetual, Pending; **PRED 768** (County Roads) Emery County, Perpetual; **GP 22863.22** - William Allred, Exp 06/30/2037; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 4.88 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 3.3 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 13.36 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 1.6 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,880.23 Acres (Partial 10.6%) - 413.52 Acres and 6.3 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 1.6 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 8.4 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 10.6%) - 413.52 Acres and 1 AUMs in Emery County Exchange	N/A	**GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022 ; **GP 22863.07A** -William Allred, Exp. 06/30/2022; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022; **TA 838** (Needle & Thread Seed Collection) Maple Leaf Company, Exp. 07/31/2010; **MP 52922 MP** (Industrial Sands) Randall J. Betsill, Exp. 08/31/2016	U. S. Confirmatory Patent 43-65-0067	9/23/1964	6/27/1956
SE198	Emery	SCH	21S	12E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **SFP 1009** (Globe Mallow Seed) Aaron Nance, Exp. 07/10/2004; **SFP 2092** (Firewood+Q136) Kim Leany, Exp. 07/31/2007; **TA 838** (Needle & Thread Seed Collection) Maple Leaf Company, Exp. 07/31/2010	U. S. Confirmatory Patent 43-65-0067	9/23/1964	6/27/1956

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SE199	Emery	SCH	21S	13E	32	SLB&M	LOTS 1(44.60), 2(44.74), 3(44.90), 4(45.04), N2, N2S2 [ALL]	659.28	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12.34%) 659.28 Acres and 27.9 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **SFP 1009** (Globe Mallow Seed) Aaron Nance, Exp. 07/10/2004	U. S. Confirmatory Patent 43-65-0148	3/26/1965	12/4/1962
SE200	Emery	SCH	21S	13E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **ROE 6563** (Commercial Filming) Outside TV/Dave Butkus, Exp. 04/30/2018	U. S. Confirmatory Patent 43-65-0148	3/26/1965	12/4/1962
SE201	Emery	SCH	22S	9E	2	SLB&M	Lots 1(39.86), 2(39.91), 3(39.95), 4(40.00), S2N2, S2 [ALL]	639.72	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23319** - Earl & Sheila Gordon, Exp 06/30/2024	**GP 23319** - 80 Total AUMs - 1,599.72 Acres (Partial 40%) 639.72 Acres and 32 AUMs in Emery County Exchange	N/A	**GP 21352** - Wood Hollow Cattle Association c/o Jesse Russell Nelson; **GP 21352.99** - Wood Hollow Cattle Association c/o Jesse Russell Nelson, Exp. 08/29/2003	U. S. Confirmatory Patent 43-65-0155	3/26/1965	8/16/1957
SE202	Emery	SCH	22S	9E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23319** - Earl & Sheila Gordon, Exp 06/30/2024; **GP 20127.09** - John R. & Sheila K. Lemon, Exp 06/30/2024	**GP 23319** - 80 Total AUMs - 1,599.72 Acres (Partial 20%) 320.00 Acres and 16 AUMs in Emery County Exchange; **GP 20127.09** - 82 Total AUMs - 1,666.40 Acres (Partial 19.2%) 320.00 Acres and 15.74 AUMs in Emery County Exchange	N/A	**GP 20127** - John R. & Sheila K. Lemon, Exp. 06/30/2009; **GP 21352.99** Wood Hollow Cattle Association c/o Jesse Russell Nelson, Exp. 08/29/2003	U. S. Confirmatory Patent 43-65-0155	3/26/1965	8/16/1957
SE203A	Emery	SCH	22S	9E	36	SLB&M	ALL [LESS 115.09 ACRES CONVEYANCE IN ROW QCD 896-D METES & BOUNDS WITHIN NE4, NE4NW4, S2NW4, NE4SW4, W2SW4]	524.91	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23080.14** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23080.14** - 125 Total AUMs - 2,799.31 Acres (Partial 9.93%) - 278.00 Acres and 12.4 AUMs in Emery County Exchange	N/A	**ROE 5653** (Search & Rescue Training) Black Dragon Rescue Systems, LLC, Exp. 07/31/2012;	U. S. Confirmatory Patent 43-65-0155	3/26/1965	8/16/1957
SE203B	Emery	SCH	22S	9E	36	SLB&M	NE4, NE4NW4, S2NW4, NE4SW4, W2SW4 [WITHIN] [Conveyance in ROW QCD 896-D Metes & Bounds]	0.00	115.09	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 896.D** (ROW Conveyance - Interstate 70) UDOT	U. S. Confirmatory Patent 43-65-0155	3/26/1965	8/16/1957

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PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE204	Emery	SCH	22S	10E	2	SLB&M	LOTS 1(39.98), 2(39.96), 3(39.92), 4(39.90), S2N2, S2 [ALL]	639.76	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22188.17** - Jesse Jensen, Exp 06/30/2032; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22188.17** - 36 Total AUMs - 2,791.38 Acres (Partial 11.46%) 319.78 Acres and 4 AUMs in Emery County Exchange; **GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 6.77%) 319.98 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 20914** - Nielson Ranches, LLC, Exp. 06/30/2012; **GP 22188** - Russel H. & Darrell F. Jensen, Exp. 06/30/2002; **GP 22188.02** - Russel H. Jensen, Exp. 06/30/2017	U. S. Confirmatory Patent 43-65-0203	5/24/1965	2/29/1924
SE205	Emery	SCH	22S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22362.08** - Kash Winn, Exp 06/30/2023	**GP 22362.08** - 84 Total AUMs - 2,479.27 Acres (Partial 25.8%) 640.00 Acres and 21.7 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon McElprang, Exp. 06/30/2011	U. S. Confirmatory Patent 43-65-0203	5/24/1965	2/29/1924
SE206A	Emery	SCH	22S	10E	32	SLB&M	ALL [LESS 80.73 ACRES CONVEYANCE ROW QCD 896-D METES & BOUNDS WITHIN S2N2, N2S2]	559.27	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22362.08** - Kash Winn, Exp 06/30/2023	**GP 22362.08** - 84 Total AUMs - 2,479.27 Acres (Partial 22.56%) 559.27 Acres and 19 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon McElprang, Exp. 06/30/2011	U. S. Confirmatory Patent 43-65-0203	5/24/1965	2/29/1924
SE206B	Emery	SCH	22S	10E	32	SLB&M	S2N2, N2S2 [WITHIN] [Conveyance in ROW QCD 896-D METES & BOUNDS]	0.00	80.73	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 896.D** (ROW Conveyance - Interstate 70) UDOT	U. S. Confirmatory Patent 43-65-0203	5/24/1965	2/29/1924

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SE207	Emery	SCH	22S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20664.11** - Kash Winn, Exp 06/30/2026; **ROW 2435** (Construct & Maintain Road) BLM, Perpetual; **SULA 1907** (Proposed Cell & Wireless Tower Site) DW Tower, LLC, Exp. 05/31/2051	**GP 20664.11** - 41 Total AUMs - 960.00 Acres (Partial 66.67%) 640.00 Acres and 27 AUMs in Emery County Exchange	**93-3373** (Stockwatering & Reservoir) Flow Unevaluated	**GP 20368** - Kash Winn, Exp. 06/30/2009; **GP 20368.09** - Kash Winn, Exp. 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 50573** (Metalliferous Lease) Metamin Enterprises US, Inc., Exp. 12/31/2016	U. S. Confirmatory Patent 43-65-0203	5/24/1965	2/29/1924
SE208	Emery	SCH	22S	11E	2	SLB&M	LOTS 1(40.07), 2(40.02), 3(39.96), 4(39.91), S2N2, S2 [ALL]	639.96	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.5%) 639.96 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 22671** - Nielson Ranches, LLC, Exp 06/30/2012	U. S. Confirmatory Patent 43-65-0203	5/24/1965	4/26/1935
SE209	Emery	SCH	22S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22671.12** - Nielson Ranches, LLC, Exp 06/30/2027	**GP 22671.12** - 309 Total AUMs - 4,724.94 Acres (Partial 13.5%) 640.00 Acres and 42 AUMs in Emery County Exchange	N/A	**GP 22671** - Nielson Ranches, LLC, Exp. 06/30/2012; **ML 51051** (Metalliferous Lease) Bob J. Shupe, Exp. 11/24/2008; **ML 51878** (Metalliferous Lease) Metamin Enterprises US, Inc., Exp. 11/30/2020	U. S. Confirmatory Patent 43-65-0203	5/24/1965	4/26/1935
SE210	Emery	SCH	22S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025; **ROW 2646** (Access Road) BLM, Perpetual; **ROW 713** (Construct Reservoir) BLM, Perpetual	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 17.7%) 640.00 Acres and 52 AUMs in Emery County Exchange	**93-3080** (Stockwatering & Reservoir) Flow Unevaluated	**GP 22565** - Ross Hinkins, Exp. 06/30/2010	U. S. Confirmatory Patent 43-65-0203	5/24/1965	4/26/1935

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SE211	Emery	SCH	22S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 17.7%) 640.00 Acres and 52 AUMs in Emery County Exchange	N/A	**GP 22565** - Ross Hinkins, Exp. 06/30/2010; **SFP 2437** (Firewood) Greg Parsons, Exp. 02/21/2010; **SFP 2438** - Scott Robertson, Exp. 02/21/2010	U. S. Confirmatory Patent 43-65-0203	5/24/1965	4/26/1935
SE212	Emery	SCH	22S	12E	2	SLB&M	LOTS 1(39.80), 2(39.84), 3(39.88), 4(39.92), S2N2, S2 [ALL]	639.44	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029; **GP 22863.22** - William Allred, Exp 06/30/2037; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 6%) 320.00 Acres and 14 AUMs in Emery County Exchange; **GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 3.77 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 2.5 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 10.3 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 1.23 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 5 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 1.23 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 6.5 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 8.2%) - 319.80 Acres and 1 AUMs in Emery County Exchange	N/A	**GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022 ; **GP 22863.07A** -William Allred, Exp 06/30/22; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022; **GP 23099** - Dix Jensen, Exp. 06/30/2015; **SFP 1009** (Globe Mallow Seed) Aaron Nance, Exp. 07/10/2004; **TA 838** (Needle & Thread Seed Collection) Maple Leaf Company, Exp. 07/31/2010	U. S. Confirmatory Patent 43-65-0155	3/26/1965	6/27/1956

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SE213A	Emery	SCH	22S	12E	16	SLB&M	ALL [LESS METES & BOUNDS ROW QCD 907-D 41.25 ACRES WITHIN S2S2]	598.75	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **ROW 647** (Control Fence) BLM, Perpetual; **ROW 804** (Reservoir & Water Hauling Project) BLM, Perpetual; **PRED 768** (County Roads) Emery County, Perpetual; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029; **GP 22863.22** - William Allred, Exp 06/30/2027; **GP 22863.022A** -William Allred, Exp 06/30/2027; **GP 22863.22B** - Hugh Grange, Exp 06/30/2037; **GP 22863.22C** - Jensen Ranches, LLC, Exp 06/30/2037; **GP 22863.22E** - Cliff & Breezie McElprang, Exp 06/30/2037; **GP 22863.22F** - Leon McElprang, Exp 06/30/2037; **GP 22863.22G** - Lee & Leon McElprang, Exp 06/30/2037; **GP 22863.22H** - Thomas McElPrang, Exp 06/30/2037; **GP 22863.22J** - Nielson Ranches, LLC, Exp 06/30/2037	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 1%) 22.00 Acres and 2 AUMs in Emery County Exchange; **GP 22863.22** - 46 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 7.08 AUMs in Emery County Exchange; **GP 22863.22A** - 23 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 3.5 AUMs in Emery County Exchange; **GP 22863.22B** - 31 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 5 AUMs in Emery County Exchange; **GP 22863.22C** - 126 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 20 AUMs in Emery County Exchange; **GP 22863.22E** - 15 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 2.3 AUMs in Emery County Exchange; **GP 22863.22F** - 59 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 9 AUMs in Emery County Exchange; **GP 22863.22G** - 15 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 2.3 AUMs in Emery County Exchange; **GP 22863.22H** - 79 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 12.2 AUMs in Emery County Exchange; **GP 22863.22J** - 9 Total AUMs - 3,900.23 Acres (Partial 15.4%) - 598.75 Acres and 1.4 AUMs in Emery County Exchange	**93-3023** (Stockwatering & Reservoir) Flow Unevaluated	**GP 22863** - Virl E. Winder, Exp. 06/30/2007; **GP 22863.07** - William Allred, Exp 06/30/2022 ; **GP 22863.07A** -William Allred, Exp 06/30/2022; **GP 22863.07B** - Hugh Grange, Exp 06/30/2022; **GP 22863.07C** - Jensen Ranches, LLC, Exp 06/30/2022; **GP 22863.07D** - Peter & Tiana McElprang, Expired 08/29/2011; **GP 22863.07E** - Cliff & Breezie McElprang, Exp 06/30/2022; **GP 22863.07F** - Lee McElprang, Exp 06/30/2022; **GP 22863.07G** - Lee & Leon McElprang, Exp 06/30/2022; **GP 22863.07H** - Thomas McElPrang, Exp 06/30/2022; **GP 22863.07I** - Newell Lynn Nelson, Exp. 09/04/2012; **GP 22863.07J** - Nielson Ranches, LLC, Exp 06/30/2022; **GP 23099** - Dix Jensen, Exp. 06/30/2015; **SFP 2092** (Firewood) Kim Leany, Exp. 07/31/2007; **SFP 2542** (Native Seed - Needle & Thread) Stevenson Intermountain Seed, Inc., Exp 07/21/2010; **SFP 2587** (Needle & Thread Seed) Mountain West Seed Co., Exp. 07/31/2011; **TA 838** (Needle & Thread Seed Collection) Maple Leaf Company, Exp. 07/31/2010	U. S. Confirmatory Patent 43-65-0155	3/26/1965	6/27/1956

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SE213B	Emery	SCH	22S	12E	16	SLB&M	S2S2 [WITHIN] [METES & BOUNDS Conveyance in ROW QCD 907-D]	0.00	41.25	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 907.D** (ROW Conveyance I70) UDOT	U. S. Confirmatory Patent 43-65-0155	3/26/1965	6/27/1956
SE214	Emery	SCH	22S	12E	32	SLB&M	LOTS 1(24.55), 2(24.61), 3(24.67), 4(24.73) E2 [ALL]	418.56	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 11.57%) 418.56 Acres and 34 AUMs in Emery County Exchange	N/A	**GP 22565** - Ross Hinkins, Exp. 06/30/2010; **SFP 2092** (Firewood) Kim Leany, Exp. 07/31/2007; **ML 52925 MP** (Industrial Sands Permit) Kevin T. Mulhearn, Exp. 02/17/2015	U. S. Confirmatory Patent 43-65-0155	3/26/1965	6/27/1956
SE215	Emery	SCH	22S	12E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	**93-3082** (Stockwatering & Reservoir) Flow Unevaluated	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 2092** (Firewood) Kim Leany, Exp. 07/31/2007	U. S. Confirmatory Patent 43-65-0155	3/26/1965	6/27/1956
SE216A	Emery	SCH	22S	13E	2	SLB&M	LOTS 1(46.03), 2(45.23), 3(44.36), 4(43.48), S2N2, S2 [ALL] [LESS 157.81 ACRES IN ROW QCD 1020-D AND 1.99 ACRES IN ROW QCD 1798-D]	499.30	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 9.4%) 499.30 Acres and 22 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014	U. S. Confirmatory Patent 43-76-0033	1/30/1976	12/4/1962
SE216B	Emery	SCH	22S	13E	2	SLB&M	SW4NW4 [WITHIN] [METES & BOUNDS Conveyance in ROW QCD 1798-D]	0.00	1.99	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 1798.D** (I-70 Runaway Lane Conveyance) UDOT	U. S. Confirmatory Patent 43-76-0033	1/30/1976	12/4/1962
SE216C	Emery	SCH	22S	13E	2	SLB&M	NW4 [WITHIN] [METES & BOUNDS Conveyance ROW QCD 1020-D]	0.00	157.81	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 1020.D** (Freeway I-70-3(6) 143 Conveyance) UDOT	U. S. Confirmatory Patent 43-76-0033	1/30/1976	12/4/1962
SE217	Emery	SCH	22S	13E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen c/o Butch Jensen, Exp. 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **SFP 1009** (Globe Mallow Seed) Aaron Nance, Exp. 07/10/2004; **ML 52926 MP** (Industrial Sands Permit) Kevin T. Mulhearn, Exp. 02/17/2015	U. S. Confirmatory Patent 43-66-0102	2/21/1966	3/8/1915
SE218	Emery	SCH	22S	13E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen, Exp 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014	U. S. Confirmatory Patent 43-66-0102	2/21/1966	3/8/1915

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SE219	Emery	SCH	22S	13E	36	SLB&M	LOTS 1(41.33), 2(40.95), 3(40.57), 4(40.19), W2E2, W2 [ALL]	643.04	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22922.08** - Kent Murdock, Exp 06/30/2026;**GP 22922.A08** - Rodger Hutchings, Exp. 06/30/2026; **GP 22922.B08** - S and S Ranch, LLC, Exp. 06/30/2026	**GP 22922.08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMswith a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.A08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.B08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp. 06/30/2008	U. S. Confirmatory Patent 43-66-0102	2/21/1966	3/8/1915
SE220	Emery	SCH	23S	7E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22186.17** - Gurney Cattle Co., LLC. Exp 06/30/2032	**GP 22186.17** - 297 Total AUMs - 9,237.73 Acres (Partial 7%) - 640.00 Acres and 20.8 AUMs in Emery County Exchange	**94-1234** (Stockwatering) Flow 0.011 cfs; **94-1235** (Stockwatering) Flow Unevaluated	**GP 22186** - Robert E. Anderson, Exp 06/30/2002; **GP 22186.02** - Richard R. & Genevieve Benson, Exp. 06/30/2017; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0168	4/21/1965	5/6/1954
SE221	Emery	SCH	23S	8E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23254.09** - Black Dragon Ranch, LLC, Exp 06/30/2025	**GP 23254.09** - 311 Total AUMs - 6,509.70 Acres (Partial 10%) - 640.00 Acres and 31 AUMs in Emery County Exchange	N/A	**GP 22947** - Castle Valley Ranches LLC, Exp. 06/30/2009; **GP 23254** - Rainbow Glass Ranch c/o Ross Hinkins; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0168	4/21/1965	9/20/1957
SE222	Emery	SCH	23S	8E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22186.17** - Gurney Cattle Co., LLC, Exp 06/30/2032	**GP 22186.17** - 297 Total AUMs - 9,237.73 Acres (Partial 7%) - 640.00 Acres and 20.8 AUMs in Emery County Exchange	N/A	**GP 22186** - Robert E. Anderson, Exp 06/30/2002; **GP 22186.02** - Richard R. & Genevieve Benson, Exp. 06/30/2017; **ML 50925** (Metalliferous Lease) Brad Lindsay, Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0168	4/21/1965	9/20/1957
SE223	Emery	SCH	23S	8.5E	36	SLB&M	LOTS 1(16.46), 2(16.51), 3(16.55), 4(16.60), E2 [ALL]	386.12	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23254.09** - Black Dragon Ranch, LLC, Exp 06/30/2025	**GP 23254.09** - 311 Total AUMs - 6,509.70 Acres (Partial 6%) - 386.12 Acres and 18.7 AUMs in Emery County Exchange	N/A	**GP 20872** - Castle Valley Ranches LLC, Exp. 10/18/2001; **GP 23254** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2009; **ML 50925** (Metalliferous Lease) Brad Lindsay, Exp. 08/31/2009	U. S. Confirmatory Patent 43-65-0168	4/21/1965	6/27/1956

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SE224A	Emery	SCH	23S	9E	2	SLB&M	LOTS 1(40.14), 2(40.19), 3(40.23), 4(40.28), S2N2, S2 [ALL] [LESS METES & BOUNDS ROW QCD 896-D 38.19 ACRES WITHIN NW4]	602.65	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23080.14** -Black Dragon Ranch, LLC, Exp 06/30/2029; **ROW 3069** (Access Road) BLM, Perpetual	**GP 23080.14** - 125 Total AUMs - 2,799.31 Acres (Partial 21.5%) - 602.65 Acres and 27 AUMs in Emery County Exchange	**94-1268** (Stockwatering & Reservoir) Flow Unevaluated	**SFP 1021** (Utah Beeplant Seed) Aaron Nance, Exp. 08/19/2004	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE224B	Emery	SCH	23S	9E	2	SLB&M	NW4 [WITHIN] [METES & BOUNDS Conveyance in ROW QCD 896-D]	0.00	38.19	0.00	Give Up Minerals Only	San Rafael Swell	None	N/A	N/A	**ROW 896.D** (ROW Conveyance - Interstate 70) UDOT	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE225	Emery	SCH	23S	9E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23254.09** - Black Dragon Ranch, LLC, Exp 06/30/2025	**GP 23254.09** - 311 Total AUMs - 6,509.70 Acres (Partial 10%) - 640.00 Acres and 31 AUMs in Emery County Exchange	N/A	**GP 20872** - Castle Valley Ranches LLC, Exp. 10/18/2001; **GP 23254** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2009; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 2152** (Firewood) Randy Arnold, Exp. 01/02/2008	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE226	Emery	SCH	23S	9E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23254.09** - Black Dragon Ranch, LLC, Exp 06/30/2025; **RIP 550** (Globe Link Ponds) Rainbow Glass Ranch, Exp 07/27/2034	**GP 23254.09** - 311 Total AUMs - 6,509.70 Acres (Partial 10%) - 640.00 Acres and 31 AUMs in Emery County Exchange	**94-1902** (Stockwatering) Flow 0.6138 ACFT	**GP 20872** - Castle Valley Ranches LLC, Exp. 10/18/2001; **GP 23254** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2009; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 2130** (Firewood) Dean Ekker, Exp. 12/10/2007; **ML 49587** (Metalliferous Lease) John D. Adams, Exp. 02/23/2007; **ML 50853** (Metalliferous Lease) Energy Metals Corporation (US), Exp. 07/27/2009	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE227	Emery	SCH	23S	9E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **PRED 768** (County Roads) Emery County, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 14.2%) - 640.00 Acres and 21 AUMs in Emery County Exchange	**94-1241** (Stockwatering) Flow Unevaluated	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 50933** (Metalliferous Lease) Dennis Ekker, Exp. 09/08/2008	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956

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SE228	Emery	SCH	23S	10E	2	SLB&M	LOTS 1(39.78), 2(39.76), 3(39.76), 4(39.74), S2N2, S2 [ALL]	639.04	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21306.14** - Rainbow Glass Ranch, Exp 06/30/2029; **ROW 720** (Construct Earthen Reservoir) BLM, Perpetual	**GP 21306.14 -** 54 Total AUMs - 1,279.04 Acres (Partial 50%) 639.04 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 21306.99** - Rainbow Glass Ranch c/o Ross Hinkins, Exp 06/30/2014; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 1142** (Firewood) Tom Hughes, Exp. 12/15/2004; **SFP 1149** (Firewood) Greg Parsons, Exp. 03/01/2005; **SFP 1196** (Firewood) Randy Arnold, Exp. 03/31/2006; **SFP 1198** (Firewood) Lenard Johnson, Exp. 12/15/2005; **SFP 1199** (Firewood) Kent Johnson, Exp. 12/15/2005; **SFP 1351** (Firewood) Scott Robertson, Exp. 11/10/2006; **SFP 1365** (Firewood) Tom Hughes, Exp. 12/31/2006; **SFP 1366** (Firewood) Nolan Johnson, Exp. 12/31/2006; **SFP 1370** (Firewood) Blake Liddell, Exp. 12/31/2006; **SFP 1372** (Firewood) Lenard Johnson, Exp. 12/30/2006; **SFP 1373** (Firewood) Kent Johnson, Exp. 12/30/2006; **SFP 1374** (Firewood) Randolph Arnold, Exp. 01/31/2007; **SFP 2154** (Firewood) Lenard Johnson, Exp. 01/09/2008; **SFP 2155** (Firewood) Kent Johnson, Exp. 02/09/2008; **SFP 2309** (Firewood) Gary Riches, Exp. 11/30/2008; **SFP 2322** (Firewood) Kitty Marshall, Exp. 12/31/2008; **SFP 2326** (Firewood) Lenard Johnson, Exp. 01/15/2009; **SFP 2327** (Firewood) Kent Johnson, Exp. 01/15/2009; **SFP 2433** (Firewood) Randy Arnold, Exp 01/01/2010; **SFP 2434** (Firewood) Kent Johnson, Exp. 02/08/2010; **SFP 2723** (Firewood) Bruce Riches, Exp. 11/16/2011; **SFP 2734** (Firewood) Kevin Marshall, Exp. 12/13/2011; **SFP 2435** (Firewood) Lenard Johnson, Exp. 02/08/2010; **SFP 2661** (Firewood) Kitty Marshall, Exp. 12/06/2010; **SFP 2672** (Firewood) Randy Arnold, Exp. 11/09/2010; **SFP 2675** (Firewood) Lenard Johnson, Exp. 01/17/2011; **SFP 2748** (Firewood) Kent Johnson, Exp. 01/09/2012;	U. S. Confirmatory Patent 43-65-0184	4/29/1965	2/29/1924

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																SFP 2749 (Firewood) Lenard Johnson, Exp. 01/09/2012; **SFP 2943** (Firewood) Lenard Johnson, Exp. 01/13/2013; **ML 50735** (Metalliferous Lease) 448018 Exploration Inc., Exp. 05/17/2010			
SE229	Emery	SCH	23S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **GP 20664.11** - Kash Winn, Exp 06/30/2026; **ROW 2435** (Maintain Road) BLM, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 7.1%) - 320.00 Acres and 10.6 AUMs in Emery County Exchange; **GP 20664.11** - 41 Total AUMs - 960.00 Acres (Partial 33.3%) - 320.00 Acres and 13.7 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **GP 20664** - Kash Winn, Exp 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 2322** (2 Cords Firewood) Kitty Marshall, Exp. 12/31/2008; **SFP 2433** (Firewood) Randy Arnold, Exp. 01/01/2010; **SFP 2734** (Firewood) Kevin Marshall, Exp. 12/13/2011; **SFP 2748** (Firewood) Kent Johnson, Exp. 01/09/2012; **SFP 2749** (Firewood) Lenard Johnson, Exp.01/09/2012; **ML 50902** (Metalliferous Lease) Hartmut W. Baitis, Exp. 07/27/2009	U. S. Confirmatory Patent 43-65-0184	4/29/1965	2/29/1924
SE230	Emery	SCH	23S	10E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **ESMT 1570** (Emery County Road) Emery County, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 14.2%) - 640.00 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 2130** (Firewood) Dean Ekker, Exp. 12/10/2007; **ML 50946** (Metalliferous Lease) Dennis Ekker, Exp. 12/13/2010	U. S. Confirmatory Patent 43-65-0184	4/29/1965	2/29/1924
SE231	Emery	SCH	23S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20835.11** - Wade K. Jensen, Exp 06/30/2026; **ESMT 1570** (Emery County Road) Emery County, Perpetual; **PRED 768** (County Roads) Emery County, Perpetual	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 12.5%) - 640.00 Acres and 32 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0184	4/29/1965	2/29/1924
SE232	Emery	SCH	23S	11E	2	SLB&M	LOTS 1(39.94), 2(39.84), 3(39.76), 4(39.66), S2N2, S2 [ALL]	639.20	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025; **ROW 719** (Construct Earthen Reservoir) BLM, Perpetual	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 17.7%) 639.20 Acres and 51.7 AUMs in Emery County Exchange	**93-3081** (Stockwatering) Flow Unevaluated	**GP 22565** - Ross Hinkins, Exp 06/30/2010; **ROW 850** (Allotment Boundary Fence) BLM, Exp. 07/16/2003; **SFP 2159** (Firewood) Glade Nielson. Exp. 02/07/2008; **ML 52710** (Industrial Sands Permit) Charles H. Merchant, Exp. 05/16/2016	U. S. Confirmatory Patent 43-65-0184	4/29/1965	4/8/1935

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SE233	Emery	SCH	23S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 21306.14** - Rainbow Glass Ranch, Exp 06/30/2029	**GP 21306.14** - 54 Total AUMs - 1,279.04 Acres (Partial 50%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 21306** - Theron Don Jorgenson, Exp 04/30/1999; **GP 21306.99** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2014; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **SFP 1147** (2 Cords Firewood) Brent Taylor, Exp. 02/05/2005; **SFP 1148** (2 Cords Firewood) Trent Taylor, Exp. 02/05/2005; **SFP 1197** (Firewood) Brent Taylor, Exp. 12/20/2005; **SFP 2158** (Firewood) Brent Taylor, Exp. 02/07/2007; **SFP 2332** (Firewood) Brent Taylor, Exp. 12/15/2008	U. S. Confirmatory Patent 43-65-0184	4/29/1965	4/8/1935
SE234	Emery	SCH	23S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20835.11** - Wade K. Jensen, Exp 06/30/2026	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 12.5%) - 640.00 Acres and 32 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 52711** (Industrial Sands Permit) Charles H. Merchant, Exp. 04/20/2015	U. S. Confirmatory Patent 43-65-0184	4/29/1965	4/8/1935
SE235	Emery	SCH	23S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20835.11** - Wade K. Jensen, Exp 06/30/2026	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 12.5%) - 640.00 Acres and 32 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011	U. S. Confirmatory Patent 43-65-0184	4/29/1965	4/8/1935
SE236	Emery	SCH	23S	12E	2	SLB&M	LOTS 1(39.99), 2(39.99), 3(39.97), 4(39.97), S2N2, S2 [ALL]	639.92	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 8.8%) 320.00 Acres and 26 AUMs in Emery County Exchange	N/A	**GP 22565** - Ross Hinkins, Exp 06/30/2010	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE237	Emery	SCH	23S	12E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 17.7%) 640.00 Acres and 51.7 AUMs in Emery County Exchange	N/A	**ML 52925 MP** (Industrial Sands Permit) Kevin T. Mulhearn, Exp. 02/17/2015	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE238	Emery	SCH	23S	12E	32	SLB&M	LOTS 1(24.44), 2(24.43), 3(24.43), 4(24.42), E2 [ALL]	417.72	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20835.11** - Wade K. Jensen, Exp 06/30/2026; **GP 21164.13** - Rainbow Glass Ranch, Exp 06/30/2028	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 4.1%) - 208.85 Acres and 10.4 AUMs in Emery County Exchange; **GP 21164.13** - 24 Total AUMs - 1,359.31 Acres (Partial 15.4%) - 208.87 Acres and 3.7 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **GP 21164** - Rainbow Glass Ranch c/o Ross Hinkins, Exp 06/30/2013	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956
SE239	Emery	SCH	23S	12E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22565.10** - Rainbow Glass Ranch, Exp 06/30/2025; **GP 21164.13** - Rainbow Glass Ranch, Exp 06/30/2028	**GP 22565.10** - 292 Total AUMs - 3,617.76 Acres (Partial 8.9%) 320.00 Acres and 26 AUMs in Emery County Exchange; **GP 21164.13** - 24 Total AUMs - 1,359.31 Acres (Partial 23.5%) - 320.00 Acres and 5.7 AUMs in Emery County Exchange	N/A	**GP 20517** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2010; **GP 21164** - Rainbow Glass Ranch c/o Ross Hinkins, Exp 06/30/2013	U. S. Confirmatory Patent 43-65-0156	3/26/1965	6/27/1956

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SE240	Emery	SCH	23S	13E	2	SLB&M	LOTS 1(39.72), 2(39.77), 3(39.81), 4(39.86), S2N2, S2 [ALL]	639.16	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22922.08** - Kent Murdock, Exp 06/30/2026;**GP 22922.A08** - Rodger Hutchings, Exp. 06/30/2026; **GP 22922.B08** - S and S Ranch, LLC, Exp. 06/30/2026	**GP 22922.08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMswith a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.A08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.B08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp 06/30/2008; **ML 53181** (OG&AH Lease) America Resources Exploration Inc., Ex. 11/07/2016	U. S. Confirmatory Patent 43-65-0236	6/15/1965	12/4/1962
SE241	Emery	SCH	23S	13E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23399** - Black Dragon Ranch, LLC, Exp 06/30/2029	**GP 23399** - 226 Total AUMs - 5,340.58 Acres (Partial 12%) 640.00 Acres and 27 AUMs in Emery County Exchange	N/A	**GP 20814** - James T. Jensen, Exp 06/30/2011; **GP 20814.11** - James T. Jensen c/o Butch Jensen, Exp. 02/25/2014; **ML 53182** (OG&AH Lease) America Resources Exploration Inc., Ex. 11/07/2016	U. S. Confirmatory Patent 43-66-0038	9/23/1965	3/8/1915
SE242	Emery	SCH	23S	13E	32	SLB&M	LOTS 1(39.94), 2(39.81), 3(39.69), 4(39.56), S2N2, S2 [ALL]	639.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22922.08** - Kent Murdock, Exp 06/30/2026;**GP 22922.A08** - Rodger Hutchings, Exp. 06/30/2026; **GP 22922.B08** - S and S Ranch, LLC, Exp. 06/30/2026	**GP 22922.08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMswith a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.A08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange; **GP 22922.B08** - 268.45 Total AUMs - 7,587.72 Acres (Partial 8.4%) 639.16 Acres and 22.5 AUMs with a 1/3 Divided Shared Interest being 7.5 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp 06/30/2008; **ML 53183** (OG&AH Lease) America Resources Exploration Inc., Ex. 11/07/2016	U. S. Confirmatory Patent 43-65-0236	6/15/1965	12/4/1962

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PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE243	Emery	SCH	24S	8E	2	SLB&M	LOTS 1(40.03), 2(39.94), 3(39.84), 4(39.75), S2N2, S2 [ALL]	639.56	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22186.17** - Gurney Cattle Co., LLC, Exp 06/30/2032	**GP 22186.17** - 297 Total AUMs - 9,237.73 Acres (Partial 7%) - 639.56 Acres and 20.8 AUMs in Emery County Exchange	N/A	**GP 22186** - Robert E. Anderson, Exp 06/30/2002; **GP 22186.02** - Richard R. & Genevieve Benson, Exp. 06/30/2017; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-76-0003	7/17/1975	7/26/1973
SE244	Emery	SCH	24S	8E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22186.17** - Gurney Cattle Co., LLC, Exp 06/30/2032	**GP 22186.17** - 297 Total AUMs - 9,237.73 Acres (Partial 7%) - 640.00 Acres and 20.8 AUMs in Emery County Exchange	N/A	**GP 22186** - Robert E. Anderson, Exp 06/30/2002; **GP 22186.02** - Richard R. & Genevieve Benson, Exp. 06/30/2017; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-76-0003	7/17/1975	7/26/1973
SE245	Emery	SCH	24S	8E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22186.17** - Gurney Cattle Co., LLC, Exp 06/30/2032	**GP 22186.17** - 297 Total AUMs - 9,237.73 Acres (Partial 7%) - 640.00 Acres and 20.8 AUMs in Emery County Exchange	N/A	**GP 22186** - Robert E. Anderson, Exp 06/30/2002; **GP 22186.02** - Richard R. & Genevieve Benson, Exp. 06/30/2017; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-76-0003	7/17/1975	7/26/1973
SE246	Emery	SCH	24S	8E	36	SLB&M	NW4NW4, S2N2, S2	520.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **PRED 768** (County Roads) Emery County, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 11.5%) - 520.00 Acres and 17 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 49939** (Metalliferous Lease) Magnum Minerals USA Corp c/o Energy Fuels Resources Corp, Exp. 10/04/2010	U. S. Confirmatory Patent 43-65-0066	9/23/1964	6/27/1956

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SE247	Emery	SCH	24S	9E	2	SLB&M	LOTS 1(19.61), 2(19.56), 3(19.50), 4(19.45), 5(40.00), 6(40.00), 7(40.00), 8(40.00), 9(40.00), 10(40.00), 11(40.00), 12(40.00), S2N2, S2 [ALL]	878.12	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **PRED 768** (County Roads) Emery County, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 19.4%) - 878.12 Acres and 29 AUMs in Emery County Exchange	**94-1222** (Stockwatering) Flow Unevaluated	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-65-0066	9/23/1964	6/27/1956
SE248	Emery	SCH	24S	9E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 14.2%) - 640.00 Acres and 21 AUMs in Emery County Exchange	N/A	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-65-0066	9/23/1964	6/27/1956
SE249	Emery	SCH	24S	9E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027; **PRED 768** (County Roads) Emery County, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 5.3%) - 240.00 Acres and 8 AUMs in Emery County Exchange; **GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 6.7%) - 400.00 Acres and 9.6 AUMs in Emery County Exchange	N/A	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp 06/30/2014; **GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0066	9/23/1964	6/27/1956
SE250	Emery	SCH	24S	9E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.6%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	**94-1253** (Stockwatering) Flow Unevaluated; **94-1254** (Stockwatering) Flow Unevaluated	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp 06/30/2014; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0066	9/23/1964	6/27/1956

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SE251	Emery	SCH	24S	10E	2	SLB&M	LOTS 1(19.88), 2(19.85), 3(19.81), 4(19.78), 5(40.00), 6(40.00), 7(40.00), 8(40.00), 9(40.00), 10(40.00), 11(40.00), 12(40.00), S2N2, S2 [ALL]	879.32	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20835.11** - Wade K. Jensen. Exp 06/30/2026; **ROW 632** (Boundary Fence) BLM, Perpetual; **PRED 768** (County Roads) Emery County, Perpetual	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 17.2%) - 879.32 Acres and 43.7 AUMs in Emery County Exchange	**94-1248** (Stockwatering) Flow Unevaluated	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE252	Emery	SCH	24S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22978.11** - Leon & Stacy McElprang, Exp 06/30/2026; **ROW 645** (Construct Fence Line) BLM, Perpetual	**GP 22978.11** - 149 Total AUMs - 4,518.12 Acres (Partial 14%) - 640.00 Acres and 21 AUMs in Emery County Exchange	**94-1247** (Stockwatering) Flow Unevaluated	**GP 22978** - Leon & Stacy McElprang, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE253	Emery	SCH	24S	10E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.6%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	**94-1159** (Stockwatering & Reservoir) Flow Unevaluated	**GP 21261.99** - Dustin D. Huntington, Exp 06/30/2014; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE254	Emery	SCH	24S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22624.11** - Jesse Jensen, Exp 06/30/2026	**GP 22624.11** - 55 Total AUMs - 1,280.00 Acres (Partial 50%) - 640.00 Acres and 27.5 AUMs in Emery County Exchange	N/A	**GP 22624** - Russell H. Jensen, Exp 06/30/2011; **PRED 15** (Mine Reclamation, SITLA; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956

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SE255	Emery	SCH	24S	11E	2	SLB&M	LOTS 1(9.89), 2(9.88), 3(9.85), 4(9.85), 5(40.00), 6(40.00) 7(40.00), 8(40.00), 9(40.00), 10(40.00), 11(40.00), 12(40.00), S2N2; S2 [ALL]	839.48	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20835.11** - Wade K. Jensen, Exp 06/30/2026	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 16.4%) - 839.48 Acres and 41.7 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE256	Emery	SCH	24S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20835.11** - Wade K. Jensen, Exp 06/30/2026	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 12.5%) - 640.00 Acres and 31.8 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE257	Emery	SCH	24S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22624.11** - Jesse Jensen, Exp 06/30/2026; **PRED 768** (County Roads) Emery County, Perpetual	**GP 22624.11** - 55 Total AUMs - 1,280.00 Acres (Partial 50%) - 640.00 Acres and 27.5 AUMs in Emery County Exchange	N/A	**GP 22624** - Russell H. Jensen, Exp. 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 47144** (Metalliferous Minerals Lease) Plateau Resources Limited Attn: Dan Arima, Exp. 01/02/2004; **ML 47309** (Metalliferous Lease) Bruce L. Beck, Exp. 07/31/2006; **ML 50548** (Metalliferous Lease) Emery Industrial Resources, Inc., Exp. 02/17/2009; **ML 50908** (Metalliferous Lease) Thames River LLC, Exp. 07/26/2010; **ML 51683** (Metalliferous Lease) Kelly Dearth, Exp. 11/30/2019	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956

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SE258	Emery	SCH	24S	11E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23299** - Johnson Mountain Ranch, LLC, Exp 06/30/2024; **PRED 768** (County Roads) Emery County, Perpetual	**GP 23299** - 153.70 Total AUMs - 5,487.32 Acres (Partial 5.8%) - 320.00 Acres and 9 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp. 06/30/2008; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 50896** (Metalliferous Minerals Lease) Worldwide Prospectors USA Inc., Exp. 08/01/2008; **ML 52070** (Metalliferous Lease) Dennis Ekker, Exp. 05/16/2016	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE259	Emery	SCH	24S	12E	2	SLB&M	LOTS 1(47.48), 2(47.57), 3(47.65), 4(47.74), 5(40.00), 6(40.00), 7(40.00), 8(40.00), S2N2, S2 [ALL]	830.44	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 21164.13** - Rainbow Glass Ranch, Exp 06/30/2028	**GP 21164.13** - 24 Total AUMs - 1,359.31 Acres (Partial 61%) - 830.44 Acres and 14.7 AUMs in Emery County Exchange	N/A	**GP 21164** - Rainbow Glass Ranch c/o Ross Hinkins, Exp. 06/30/2013; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 50897** (Metalliferous Lease) Worldwide Prospectors USA Inc, Exp. 08/01/2008	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE260	Emery	SCH	24S	12E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20835.11** - Wade K. Jensen, Exp 06/30/2026	**GP 20835.11** - 254 Total AUMs - 5,127.65 Acres (Partial 12.5%) - 640.00 Acres and 31.8 AUMs in Emery County Exchange	N/A	**GP 20835** - Wade Kevin Jensen, Exp. 06/30/2011; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956
SE261	Emery	SCH	24S	12E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23299** - Johnson Mountain Ranch, LLC, Exp 06/30/2024	**GP 23299** - 153.70 Total AUMs - 5,487.32 Acres (Partial 11.7%) - 640.00 Acres and 18 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp. 06/30/2008; **ROE 4294** (Wilderness Camping) Community Correction Corp DBA Alternative Youth Adventures, Exp. 02/28/2021; **ROE 4547** (Wilderness Camping) Community Corrections Corp DBA Alternative Youth Adventures, Exp. 10/01/2003; **ML 50897** (Metalliferous Lease) Worldwide Prospectors USA Inc, Exp. 08/01/2008	U. S. Confirmatory Patent 43-65-0150	3/26/1965	6/26/1956

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SE262	Emery	SCH	25S	8E	2	SLB&M	LOTS 1(39.92), 2(39.89), 3(39.85), 4(39.82), S2N2, S2 [ALL]	639.48	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	None	N/A	**94-1249** (Stockwatering) Flow Unevaluated; **94-1250** (Stockwatering) Flow Unevaluated	**ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ML 49940** (Metalliferous Minerals Lease) Magnum Minerals USA Corp c/o Energy Fuels Resources Corp, Exp. 10/04/2010	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE263	Emery	SCH	25S	8E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22702.12** - Brent or Joan Coates, Exp 06/30/2027	**GP 22702.12** - 322 Total AUMs - 6,062.28 Acres (Partial 5.28%) - 320.00 Acres and 17 AUMs in Emery County Exchange	N/A	**ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE264	Emery	SCH	25S	8E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 5.3%) - 640.00 Acres and 31.8 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE265	Emery	SCH	25S	8E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	None	N/A	N/A	**ROE 6070** (Commercial Filming) Bongo, LLC/Eyeworks, LLC, Exp. 06/29/2014	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE266	Emery	SCH	25S	9E	2	SLB&M	LOTS 1(39.72), 2(39.67), 3(39.63), 4(39.58), S2N2, S2 [ALL]	638.60	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**PRED 768** (County Roads) Emery County, Perpetual; **GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.62%) - 638.60 Acres and 15.3 AUMs in Emery County Exchange	**94-1251** (Stockwatering) Flow Unevaluated; **94-1252** (Stockwatering & Reservoir) Flow Unevaluated	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp. 07/16/2012; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures; Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE267	Emery	SCH	25S	9E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.65%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	N/A	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp. 07/16/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE268	Emery	SCH	25S	9E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.65%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	N/A	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp. 07/16/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE269	Emery	SCH	25S	9E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.65%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	**94-1266** (Stockwatering) Flow Unevaluated; **94-1267** (Stockwatering) Flow Unevaluated	**GP 21261** - Mrs. Louise L. Iriart, Exp. 04/30/1999; **GP 21261.99** - Dustin D. Huntington, Exp. 07/16/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/27/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE270	Emery	SCH	25S	10E	2	SLB&M	LOTS 1(39.97), 2(39.97), 3(39.99), 4(39.99), S2N2, S2 [ALL]	639.92	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.65%) - 639.92 Acres and 15.3 AUMs in Emery County Exchange	**94-1274** (Stockwatering) Flow Unevaluated	**GP 20871** - Dustin D. Huntington, Exp 06/30/2012; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE271	Emery	SCH	25S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 10.65%) - 640.00 Acres and 15.3 AUMs in Emery County Exchange	**94-1275** (Stockwatering) Flow Unevaluated	**GP 20871** - Dustin D. Huntington, Exp 06/30/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

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SE272	Emery	SCH	25S	10E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22685.12** - Richard or Rebecca Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange	N/A	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE273	Emery	SCH	25S	10E	36	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace, Trust Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange	**94-1262** (Stockwatering) Flow Unevaluated; **94-1263** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE274	Emery	SCH	25S	11E	2	SLB&M	LOTS 1(39.86), 2(39.86), 3(39.86), 4(39.86), S2N2, S2 [ALL]	639.44	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23299** - Johnson Mountain Ranch, LLC, Exp 06/30/2024; **PRED 768** (County Roads) Emery County, Perpetual	**GP 23299** - 153.70 Total AUMs - 5,487.32 Acres (Partial 11.65%) - 639.44 Acres and 18 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp. 06/30/2008; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures; Exp. 08/31/2012; **ROE 6545** (Educational Excursions) Crow Canyon Archaeological Center, Exp. 05/01/2018; **ML 48070** (Metalliferous Minerals Lease) VIP Worldnet, Inc., Exp. 11/24/1999; **ML 50601** (Metalliferous Minerals Lease) Dennis Ekker, Exp. 01/31/2017	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE275	Emery	SCH	25S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23299** - Johnson Mountain Ranch, LLC, Exp 06/30/2024	**GP 23299** - 153.70 Total AUMs - 5,487.32 Acres (Partial 11.66%) - 640.00 Acres and 18 AUMs in Emery County Exchange	N/A	**GP 22922** - Kent Murdock, Exp. 06/30/2008; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures; Exp. 08/31/2012; **ML 48070** (Metalliferous Minerals Lease) VIP Worldnet, Inc., Exp. 11/24/1999; **ML 50898** (Metalliferous Minerals Lease) Worldwide Prospectors USA Inc., Exp. 08/01/2008	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

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SE276	Emery	SCH	25S	11E	32	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23299** - Johnson Mountain Ranch, LLC, Exp 06/30/2024; **ESMT 1570** (County Roads) Emery County, Perpetual	**GP 23299** - 153.70 Total AUMs - 5,487.32 Acres (Partial 11.66%) - 640.00 Acres and 18 AUMs in Emery County Exchange	**94-1244** (Stockwatering) Flow 0.011 cfs	**GP 22922** - Kent Murdock, Exp. 06/30/2008; **ROE 4469** (Still Photography & Recreational Activities) International Adventure Tours Inc., Exp. 12/31/2002; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures; Exp. 08/31/2012; **ML 50898** (Metalliferous Minerals Lease) Worldwide Prospectors USA Inc., Exp. 08/01/2008	U. S. Confirmatory Patent 43-67-0058	6/20/1967	6/26/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE277	Emery	SCH	26S	8E	2	SLB&M	LOTS 1(43.91), 2(44.10), 3(44.28), 4(44.47), S2N2, S2 [ALL]	656.76	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 5.4%) - 656.76 Acres and 32.4 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE278	Emery	SCH	26S	8E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 5.3%) - 640.00 Acres and 31.8 AUMs in Emery County Exchange	**94-1245** (Stockwatering & Reservoir) Flow Unevaluated; **94-1246** (Stockwatering & Reservoir) Flow Unevaluated	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE279A	Emery	SCH	26S	8E	32	SLB&M	N2, N2S2, Part SW4SW4, Part SE4SW4, Part SW4SE4, Part SE4SE4	563.40	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.7%) - 563.40 Acres and 28.2 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE279B	Wayne	SCH	26S	8E	32	SLB&M	Part SW4SW4, Part SE4SW4, Part SW4SE4, Part SE4SE4	76.60	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial .63%) - 76.60 Acres and 3.8 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE280A	Emery	SCH	26S	8E	36	SLB&M	N2, N2S2, Part SW4SW4, Part SE4SW4, Part SW4SE4, Part SE4SE4	571.34	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.7%) - 571.34 Acres and 28 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE280B	Wayne	SCH	26S	8E	36	SLB&M	Part SW4SW4, Part SE4SW4, Part SW4SE4, Part SE4SE4	68.66	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial .57%) - 68.66 Acres and 3.4 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/20/1957
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE281	Emery	SCH	26S	9E	2	SLB&M	LOTS 1(42.98), 2(43.00), 3(43.04), 4(43.06), S2N2, S2 [ALL]	652.08	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20871.12** - Dustin D. Huntington, Exp 06/30/2027	**GP 20871.12** - 144 Total AUMs - 6,010.60 Acres (Partial 8.2%) - 492.08 Acres and 11.8 AUMs in Emery County Exchange	N/A	**GP 21261.99** - Dustin D. Huntington, Exp. 07/16/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

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SE282	Emery	SCH	26S	9E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange	**94-1264** Stockwatering) Flow Unevaluated; **94-1265** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace. Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 4242** (Commercial Moving Photography) Dreamworks LLC, Exp. 05/13/1999; **ROE 5115** (Horseback & ATV Trail Rides) Kelly J. Taylor, Exp. 03/31/2009; **ROE 6070** (Commercial Filming) Bongo LLC/Eyeworks, LLC, Exp. 06/29/2014	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE283A	Emery	SCH	26S	9E	32	SLB&M	N2, N2S2, N2S2S2(90.00)	570.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.7%) - 570.00 Acres and 28.2 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE283B	Wayne	SCH	26S	9E	32	SLB&M	S2S2S2(70.00)	70.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 0.58%) - 70.00 Acres and 3.5 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches LLC, Exp. 06/30/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE284A	Emery	SCH	26S	9E	36	SLB&M	N2, N2S2, N2S2S2(90.00)	570.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.7%) - 570.00 Acres and 28.2 AUMs in Emery County Exchange	N/A	**ML 50923** (Metalliferous Minerals Lease) Christian Murer, Ex. 08/31/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE284B	Wayne	SCH	26S	9E	36	SLB&M	S2S2S2(70.00)	70.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 0.58%) - 70.00 Acres and 3.5 AUMs in Emery County Exchange	N/A	**ML 50923** (Metalliferous Minerals Lease) Christian Murer, Ex. 08/31/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE285	Emery	SCH	26S	10E	2	SLB&M	LOTS 1(44.52), 2(44.40), 3(44.28), 4(44.16), S2N2, S2 [ALL]	657.36	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**SULA 1126** (Parking Lot/Vehicle Barriers) BLM, Exp 02/29/2048; **PRED 768** (County Roads) Emery County, Perpetual: **GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027; **SULA 1976** (Telecommunication) Emery County Sheriff's Office, Exp.05/31/2052	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.9%) - 613.20 Acres and 5.3 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.9%) 613.20 Acres and 5.3 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.9%) - 613.20 Acres and 5.3 AUMs in Emery County Exchange	**94-1261** (Stockwatering) Flow Unevaluated	**GP 22916** - Pacificorp DBA Utah Power Property Department, Exp. 02/06/2004; **GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 4973** (Conduct Commercial Recreational Activities) International Adventure Tours Inc., Exp. 10/02/2006; **ROE 5096** (Commercial Tours) International Adventure Tours, Inc., Exp. 09/26/2007; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ROE 6070** (Commercial Filming) Bongo, LLC/Eyeworks, LLC, Exp. 06/29/2014; **ROE 6144** (Commercial Filming) Specialty Field Production, LLC, Exp. 01/21/2015	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

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SE286	Emery	SCH	26S	10E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **PRED 768** (County Roads) Emery County, Perpetual; **GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.2%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.2%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 7.2%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange	**94-1258** (Stockwatering) Flow Unevaluated; **94-1259** (Stockwatering) Flow Unevaluated; **94-1260** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 5660** (Therapeutic Outdoor Program) Legacy Outdoor Adventures, Exp. 08/31/2012; **ROE 6070** (Commercial Filming) Bongo, LLC/Eyeworks, LLC, Exp. 06/29/2014; **ML 49909** (Metalliferous Lease) Neutron Energy Inc., Exp. 07/27/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE287A	Emery	SCH	26S	10E	32	SLB&M	N2, N2S2, N2S2S2(97.20)	577.20	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange	**94-1255** (Stockwatering) Flow Unevaluated; **94-1256** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 6070** (Commercial Filming) Bongo, LLC/Eyeworks, LLC, Exp. 06/29/2014; **ML 49909** (Metalliferous Lease) Neutron Energy Inc., Exp. 07/27/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE287B	Wayne	SCH	26S	10E	32	SLB&M	S2S2S2(62.80)	62.80	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange	**94-1255** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROE 6070** (Commercial Filming) Bongo, LLC/Eyeworks, LLC, Exp. 06/29/2014; **ML 49909** (Metalliferous Lease) Neutron Energy Inc., Exp. 07/27/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE288A	Emery	SCH	26S	10E	36	SLB&M	N2, N2S2, N2S2S2(97.20)	577.20	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **ROW 3146** (Access Road) BLM, Perpetual; **GP 22685.12** - Richard Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 6.5%) - 577.20 Acres and 5 AUMs in Emery County Exchange	**94-1257** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **ROW 2603** (Road) Chevron USA Inc., Exp. 10/13/1986; **ML 49909** (Metalliferous Lease) Neutron Energy Inc., Exp. 07/27/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

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SITLA Lands to Convey

Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE288B	Wayne	SCH	26S	10E	36	SLB&M	S2S2S2(62.80)	62.80	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ROW 3146** (Access Road) BLM, Perpetual; **GP 22685.12 -** Richard Pace, Exp 06/30/2027; **GP 22685.A12 -** Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12 -** Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12 -** 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange; **GP 22685.A12 -** 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange; **GP 22685.B12 -** 77 Total AUMs - 8,924.92 Acres (Partial 0.71%) - 62.80 Acres and 1 AUMs in Emery County Exchange	**94-1257** (Stockwatering) Flow Unevaluated; **94-1269** (Stockwatering) 0.011 cfs	**GP 22685 -** Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A -** Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B -** Doug/Paulyn Pace, Exp. 06/30/2012; **ROW 2603** (Road) Chevron USA Inc., Exp. 10/13/1986; **ML 49909** (Metalliferous Lease) Neutron Energy Inc., Exp. 07/27/2009	U. S. Confirmatory Patent 43-67-0058	6/20/1967	8/3/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE289	Emery	SCH	26S	11E	2	SLB&M	LOTS 1(47.78), 2(47.64), 3(47.48), 4(47.34), S2N2, S2 [ALL]	670.24	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 23046.13 -** Sweetwater Enterprises, LLC, Exp 06/30/2028; **ESMT 2417** (Goblin Valley Fiber Optic Cable) Emery Telephone, Inc., DBA Emery Telcom, Pending	**GP 23046.13** - 414 Total AUMs - 8,989.72 Acres (Partial 7%) - 630.24 Acres and 29 AUMs in Emery County Exchange	N/A	**GP 22920 -** Lyman & Georgia Warr, Exp. 04/30/2009; **GP 23046 -** Cottonwood Ledges Land Co., LLC, Exp. 08/29/2011 ; **ML 48074** (Metalliferous Lease) VIP Worldnet, Inc., Exp. 09/30/2008	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE290	Emery	SCH	26S	11E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12 -** Richard Pace, Exp 06/30/2027; **GP 22685.A12 -** Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12 -** Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12 -** 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.A12 -** 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange; **GP 22685.B12 -** 77 Total AUMs - 8,924.92 Acres (Partial 7.17%) - 640.00 Acres and 5.5 AUMs in Emery County Exchange	N/A	**GP 22685 -** Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A -** Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B -** Doug/Paulyn Pace, Exp. 06/30/2012	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE291A	Emery	SCH	26S	11E	32	SLB&M	N2, N2S2, N2SW4SW4(21.17), N2SE4SW4(21.17), N2SW4SE4(21.82), N2SE4SE4(21.63)	565.79	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12 -** Richard Pace, Exp 06/30/2027; **GP 22685.A12 -** Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12 -** Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12 -** 77 Total AUMs - 8,924.92 Acres (Partial 6.4%) - 565.79 Acres and 5 AUMs in Emery County Exchange; **GP 22685.A12 -** 77 Total AUMs - 8,924.92 Acres (Partial 6.4%) - 565.79 Acres and 5 AUMs in Emery County Exchange; **GP 22685.B12 -** 77 Total AUMs - 8,924.92 Acres (Partial 6.4%) - 565.79 Acres and 5 AUMs in Emery County Exchange	**94-1232** (Stockwatering) Flow Unevaluated	**GP 22685 -** Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A -** Phillip/Jessie Pace; Exp. 06/30/2012; **GP 22685.B -** Doug/Paulyn Pace, Exp. 06/30/2012; **GP 22916 -** Pacificorp, DBA Utah Power Property Department, Exp. 02/06/2004	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

Dingell Act - Emery County Land Exchange
SITLA Lands to Convey
Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE291B	Wayne	SCH	26S	11E	32	SLB&M	S2SW4SW4(18.83), S2SE4SW4(18.83), S2SW4SE4(18.18), S2SE4SE4(18.37)	74.21	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 22685.12** - Richard or Rebecca Pace, Exp 06/30/2027; **GP 22685.A12** - Phillip G. or Jessie Pace Trust, Exp 06/30/2027; **GP 22685.B12** - Doug or Paulyn Pace, Exp 06/30/2027	**GP 22685.12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.83%) - 74.21 Acres and 1 AUMs in Emery County Exchange; **GP 22685.A12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.83%) - 74.21 Acres and 1 AUMs in Emery County Exchange; **GP 22685.B12** - 77 Total AUMs - 8,924.92 Acres (Partial 0.83%) - 74.21 Acres and 1 AUMs in Emery County Exchange	**94-1232** (Stockwatering) Flow Unevaluated	**GP 22685** - Richard/Rebecca Pace, Exp. 06/30/2012; **GP 22685.A** - Phillip/Jessie Pace: Exp. 06/30/2012; **GP 22685.B** - Doug/Paulyn Pace, Exp. 06/30/2012; **GP 22916** - Pacificorp, DBA Utah Power Property Department, Exp. 02/06/2004	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE292A	Emery	SCH	26S	11E	36	SLB&M	N2, N2S2, N2SW4SW4(20.27), N2SE4SW4(20.69), N2SW4SE4(19.49), N2SE4SE4(21.71)	562.16	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23046.13** - Sweetwater Enterprises, LLC, Exp 06/30/2028	**GP 23046.13** - 414 Total AUMs - 8,989.72 Acres (Partial 6.3%) - 562.16 Acres and 26.1 AUMs in Emery County Exchange	N/A	**GP 22920** - Lyman & Georgia Warr, Exp. 04/30/2009; **GP 23046** - Cottonwood Ledges Land Co., LLC, Exp. 08/29/2011	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE292B	Wayne	SCH	26S	11E	36	SLB&M	S2SW4SW4(19.73), S2SE4SW4(19.31), S2SW4SE4(20.51), S2SE4SE4(18.29)	77.84	0.00	0.00	Give Up Minerals and Surface	San Rafael Swell	**GP 23046.13** - Sweetwater Enterprises, LLC, Exp 06/30/2028	**GP 23046.13** - 414 Total AUMs - 8,989.72 Acres (Partial 0.87%) - 77.84 Acres and 3.6 AUMs in Emery County Exchange	N/A	**GP 22920** - Lyman & Georgia Warr, Exp. 04/30/2009; **GP 23046** - Cottonwood Ledges Land Co., LLC, Exp. 08/29/2011	U. S. Confirmatory Patent 43-67-0058	6/20/1967	4/25/1955
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
TOTAL								**82,211.64**	**435.06**	**0.00**									
Red Rock Wilderness Proposal																			
SE293A	Emery	SCH	26S	5E	36	SLB&M	N2, N2S2, N2S2S2(70.76 ACRES)	550.76	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 22496.09** -Bar X Bar Cattle Company, LLC, Exp 06/30/2024	**GP 22496.09** - 288 Total AUMs - 7,993.75 Acres (Partial 6.89%) - 550.76 Acres and 20 AUMs in Emery County Exchange	N/A	**GP 22496** - Jeffery Ranches Inc., Exp. 06/30/2009; **ML 45336** (OG&H Lease) McCabe Petroleum Corporation, Exp. 07/25/2003; **ML 50522** (OG&AH Lease) Greg Klurfeld, Exp. 03/02/2012	U. S. Confirmatory Patent 43-65-0206	5/24/1965	7/10/1956
SE293B	Wayne	SCH	26S	5E	36	SLB&M	S2S2S2(89.24 ACRES)	89.24	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 22496.09** -Bar X Bar Cattle Company, LLC, Exp 06/30/2024	**GP 22496.09** - 288 Total AUMs - 7,993.75 Acres (Partial 1%) - 89.24 Acres and 3 AUMs in Emery County Exchange		**GP 22496** - Jeffery Ranches Inc., Exp. 06/30/2009; **ML 45336** (OG&H Lease) McCabe Petroleum Corporation, Exp. 07/25/2003; **ML 50522** (OG&AH Lease) Greg Klurfeld, Exp. 03/02/2012	U. S. Confirmatory Patent 43-65-0206	5/24/1965	7/10/1956
SE294	Emery	SCH	26S	7E	2	SLB&M	LOTS 1(45.73), 2(45.75), 3(45.77), 4(45.79), S2N2, S2 [ALL]	663.04	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**ESMT 2473** (County Roads) - Emery County, Perpetual, Pending; **GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 5.5%) - 663.04 Acres and 33 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 46886** (OG&H Lease) Donald Reidl ETAL, Exp. 05/20/1998; **ML 48171** (OG&H Lease) McCabe Petroleum Corporation, Exp. 04/23/2003	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	

Dingell Act - Emery County Land Exchange

SITLA Lands to Convey

Updated 11/15/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE
SE295	Emery	SCH	26S	7E	16	SLB&M	ALL	640.00	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 5.3%) - 640.00 Acres and 32 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 43764** (OG&H Lease) Texaco Exploration & Production Inc., Exp. 02/28/1998; **ML 48171** (OG&H Lease) McCabe Petroleum Corporation, Exp. 04/23/2003; **ML 50523** (OG&AH Lease) Greg Klurfeld, Exp. 03/02/2015	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE296A	Emery	SCH	26S	7E	32	SLB&M	N2, N2S2, N2S2S2(86.16 ACRES)	566.16	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.69%) - 566.16 Acres and 28 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 45292** (OG&H Lease) McCabe Petroleum Corporation, Exp. 06/27/2003; **ML 50524** (OG&AH Lease) Greg Klurfeld, Exp. 11/30/2015	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE296B	Wayne	SCH	26S	7E	32	SLB&M	S2S2S2(73.84 ACRES)	73.84	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 0.6%) - 73.84 Acres and 4 AUMs in Emery County Exchange	N/A	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 45292** (OG&H Lease) McCabe Petroleum Corporation, Exp. 06/27/2003; **ML 50524** (OG&AH Lease) Greg Klurfeld, Exp. 11/30/2015	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE297A	Emery	SCH	26S	7E	36	SLB&M	N2, N2S2, N2S2S2(86.16)	566.16	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 4.69%) - 566.16 Acres and 28 AUMs in Emery County Exchange	**94-1224** (Stockwatering) Flow Unevaluated; **94-1225** (Stockwatering) Flow Unevaluated	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 48171** (OG&H Lease) McCabe Petroleum Corporation, Exp. 04/23/2003	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
SE297B	Wayne	SCH	26S	7E	36	SLB&M	S2S2S2(73.84)	73.84	0.00	0.00	Give Up Minerals and Surface	Muddy Creek	**GP 20395.09** - Castle Valley Ranches LLC, Exp 06/30/2024	**GP 20395.09** - 600 Total AUMs - 12,083.47 Acres (Partial 0.6%) - 73.84 Acres and 4 AUMs in Emery County Exchange	**94-1224** (Stockwatering) Flow Unevaluated	**GP 20395** - Castle Valley Ranches, LLC, Exp. 06/30/2009; **ML 48171** (OG&H Lease) McCabe Petroleum Corporation, Exp. 04/23/2003	U. S. Confirmatory Patent 43-67-0058	6/20/1967	7/10/1956
																	Amended U. S. Confirmatory Patent 43-68-0001	7/19/1967	
TOTAL								**3,223.04**	**0.00**	**0.00**									

Dingell Act - Emery County Land Exchange
SITLA Lands to Convey - Equalization Parcels
Updated 10/26/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE	COMMENTS
WASHINGTON COUNTY EQUALIZATION PARCELS																				
3C	Washington	SCH	42S	15W	4	SLB&M	LOTS 12(38.14), 13(37.91) [LOTS AKA W2SW4]	76.05	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	**ROW 2146** (Pipeline & Well Site) - City of St. George, Perpetual; **RIP 870** (Turkey Farm Road Fire ERS) SITLA, Exp. 12/20/2045	N/A	N/A	N/A	In Lieu School List 280	3/30/1964	4/17/1902	
3C	Washington	SCH	42S	15W	5	SLB&M	LOTS 7(40.45), 8(40.45), 9(40.46), 10(40.46), 15(40.47), 16(40.47) [AKA E2] [LESS LANDS SOLD UNDER P-19631 & 20324]	228.98	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	**ROW 2146** (Pipeline & Well Site) - City of St. George, Perpetual; **RIP 870** (Turkey Farm Road Fire ERS) SITLA, Exp. 12/20/2045	N/A	N/A	N/A	In Lieu School List 280	3/30/1964	4/17/1902	
3C	Washington	SCH	42S	15W	5	SLB&M	LOT 14[SE4SW4] [LESS METES & BOUNDS]	0.00	0.00	20.37	Give Up Surface Only (Includes Sand & Gravel)	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	Land Exchange City of St. George EXCH179/Warranty Deed WD000453	6/25/1987	4/17/1902	
3D	Washington	SCH	42S	15W	7	SLB&M	E2NE4SW4NE4, S2SW4NE4, SE4NE4, SE4	225.00	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	In Lieu School List 316	10/30/1972	4/17/1902	
3E	Washington	SCH	42S	15W	9	SLB&M	N2N2 Within [Less Metes & Bounds]	92.00	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	Mineral Rights: In Lieu School List 280 Surface Rights: Warranty Deed WD000229	3/30/1964 8/27/2010	4/17/1902	
7A	Washington	SCH	41S	14W	31	SLB&M	NE4, E2SE4, E2NW4SE4	260.00	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	In Lieu School List 280	3/30/1964	10/14/1921	
7A	Washington	SCH	41S	14W	32	SLB&M	W2SW4	80.00	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	U. S. Confirmatory Patent 43-66-0089	1/10/1966	10/14/1921	
7A	Washington	MH	42S	14W	5	SLB&M	WITHIN OF NW4 [Less Metes & Bounds]	56.00	0.00	0.00	Give Up Coal, Other Minerals and Surface (Oil & Gas Reserved to BLM)	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	Miners Hospital 1929 Grant Clear List 43	5/2/1986	09/03/1870	**LAND MAY NEED RESURVEYED**
7A	Washington	SCH	42S	14W	6	SLB&M	WITHIN OF E2NE4 [Less Metes & Bounds]	51.00	0.00	0.00	Give Up Coal, Other Minerals and Surface (Oil & Gas Reserved to BLM)	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	In Lieu School List 293	4/13/1965	09/03/1870	
7B	Washington	SCH	41S	14W	32	SLB&M	N2, E2SW4, SE4 [Lying North of HWY I-15]	541.00	0.00	0.00	Give Up Minerals and Surface	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	U. S. Confirmatory Patent 43-66-0089	1/10/1966	10/14/1921	**LAND MAY NEED RESURVEYED**
7B	Washington	MH	42S	14W	5	SLB&M	WITHIN NW4NE4, WITHIN NE4NW4 [Less Metes & Bounds]	21.00	0.00	0.00	Give Up Coal, Other Minerals and Surface (Oil & Gas Reserved to BLM)	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	Miners Hospital 1929 Grant Clear List 43	5/2/1986	09/03/1870	**LAND MAY NEED RESURVEYED**
7C	Washington	MH	41S	14W	33	SLB&M	WITHIN N2, WITHIN SW4, WITHIN NW4SE4 [Lying North of HWY I-15]	367.00	0.00	0.00	Give Up Coal, Other Minerals and Surface (Oil & Gas Reserved to BLM)	HCP Desert Reserve Tortoise Boundary - Equalization Parcels	N/A	N/A	N/A	N/A	Miners Hospital 1894 & 1929 Grant Clear List 43	5/2/1986	09/03/1870 & 10/14/1921	**LAND MAY NEED RESURVEYED**
		NS					N2NW4SE4NE4, N2SW4NW4SE4NE4, SE4NW4SE4NE4	8.75	0.00	0.00							Normal School Clear List 43	5/2/1986	09/03/1870	**LAND MAY NEED RESURVEYED**
		Multi					S2SW4NW4SE4NE4	1.25	0.00	0.00							Normal School Clear List 43 Miners Hospital 1894 & 1929 Grant Clear List 43	5/2/1986	09/03/1870	**LAND MAY NEED RESURVEYED**
TOTAL								**1,998.03**	**0.00**	**20.37**										

Total Full Estate Acreage for Washington County	**1,503.03**
Total Surface, Coal, and Other Minerals Only for Washington County	**495.00**
Total Surface Only for Washington County	**20.37**
Total Cumulative Acreage	**2,018.40**

Specified Estates Conveyance

Dingell Act - Emery County Land Exchange

SITLA Lands to Convey - Equalization Parcels

Updated 10/26/2022

PARCEL NO.	COUNTY	FUND	TWP	RNG	SEC	MERIDIAN	LEGAL DESCRIPTION	SURFACE & MINERAL ACRES	MINERALS ONLY ACRES	SURFACE ONLY ACRES	OWNERSHIP LAYER	AREA DESCRIPTION	ENCUMBRANCES	GRAZING DETAILS	WATER RIGHTS	HISTORIC ENCUMBRANCES INACTIVE	SOURCE DOCUMENT	APPROVAL DATE	SURVEY DATE	COMMENTS
Parcels Need Further Review by SITLA Legal Team to Verify Minerals Owed by agency.																				

Dingell Act - Emery County Land Exchange
SITLA Lands to Convey - Equalization Parcels
SITLA Lessee Name/Address
Updated 10/26/2022

PARCEL NO.	SITLA CONTRACT NO.	TYPE OF CONTRACT	EXPIRATION DATE	LESSEE NAME	ADDRESS	CITY	STATE	ZIP CODE	COMMENTS
3C	ROW 2146	Pipeline and Well Site	Perpetual	City of St. George	175 East 200 North	St. George	UT	84770	
	RIP 870	County Roads	12/20/2045	SITLA	675 East 500 South, Suite 500	Salt Lake City	UT	84102-2818	
3D	N/A								
3E	N/A								
7A	N/A								
7B	N/A								
7C	N/A								

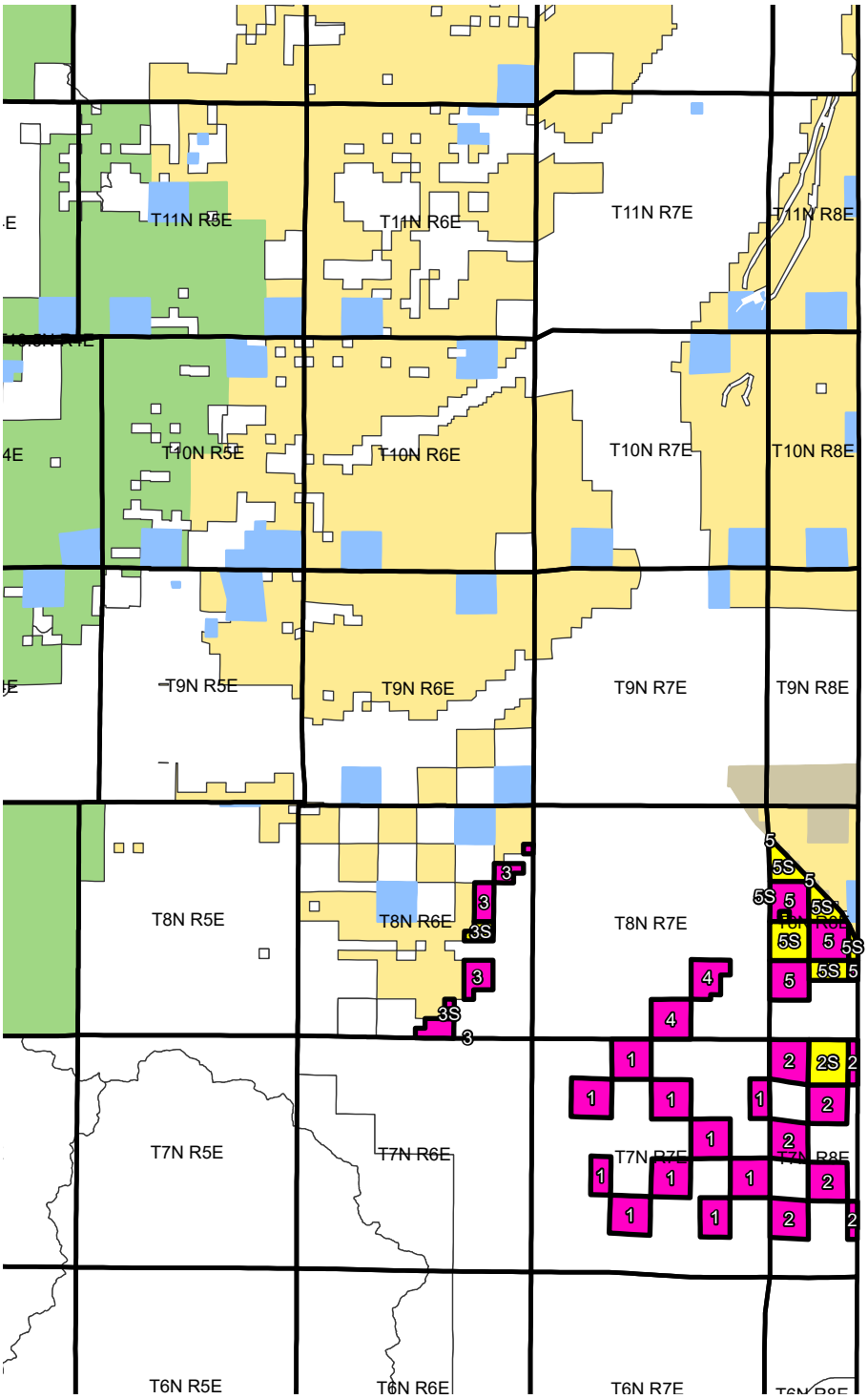
SITLA Lessee - Encumbrances might not need to be listed because the type of contract could expire upon the approval of the land exchange conveyed to BLM

Dingell Act - Emery County Land Exchange							
SITLA Lands to Convey							
Updated 10/26/2022							
PARCEL NO.	**LEGAL DESCRIPTION**				**SITLA ACQUIRED LANDS SOURCE DOCUMENT**	**SITLA DINGELL ACT LANDS TO CONVEY - DISPOSITION DOCUMENT**	**COMMENT**
	Township	**Range**	**Section**	**Legal Description**			
3C	42S	15W	4	LOTS 12(38.14), 13(37.91) [LOTS AKA W2SW4]	In Lieu School List 280		
3C	42S	15W	5	LOTS 7(40.45), 8(40.45), 9(40.46), 10(40.46), 15(40.47), 16(40.47) [AKA E2] [LESS LANDS SOLD UNDER P-19631 & 20324]	In Lieu School List 280		
3C	42S	15W	5	LOT 14[SE4SW4] [LESS METES & BOUNDS]	Land Exchange City of St. George EXCH179/Warranty Deed WD000453		
3D	42S	15W	7	E2NE4SW4NE4, S2SW4NE4, SE4NE4,	In Lieu School List 316		
3E	42S	15W	9	N2N2 Within [Less Metes & Bounds]	Mineral Rights: In Lieu School List 280 Surface Rights: Warranty Deed WD000229		
7A	41S	14W	31	NE4, E2SE4, E2NW4SE4	In Lieu School List 280		
7A	41S	14W	32	W2SW4	U. S. Confirmatory Patent 43-66-0089		
7A	42S	14W	5	WITHIN OF NW4	Miners Hospital 1929 Grant Clear List 43		
7A	42S	14W	6	WITHIN OF E2NE4	In Lieu School List 293		
7B	41S	14W	32	N2, E2SW4, SE4 [North of HWY I-15]	U. S. Confirmatory Patent 43-66-0089		
7B	42S	14W	5	WITHIN NW4NE4, WITHIN NE4NW4	Miners Hospital 1929 Grant Clear List 43		
7C	41S	14W	33	WITHIN N2, WITHIN SW4, WITHIN NW4SE4 [Lying North of HWY I-15]	Miners Hospital 1894 Grant Clear List 43 Miners Hospital 1929 Grant Clear List 43 Normal School Clear List 43		

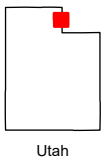
Appendix B Parcel Mapset

September 2023

Surface Ownership and Administration Map



Parcel on Current Page		
1	2S	4
2	3	5
	3S	5S



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Forest (NFS)
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

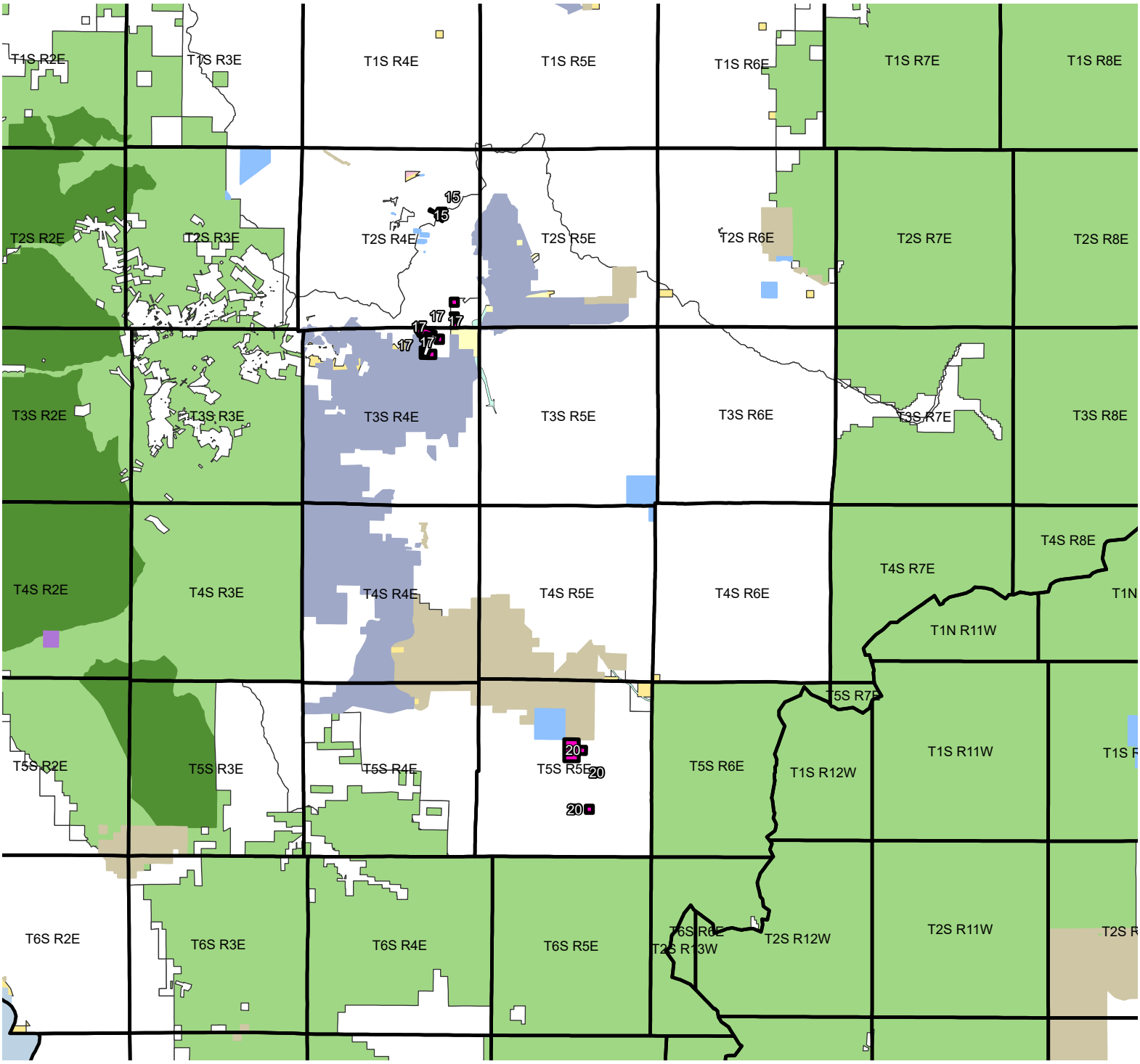
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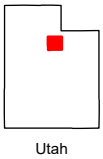
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
15
17
20



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- Bureau of Reclamation
- National Monument
- National Forest (NFS)
- National Wilderness Area
- Military Reservations and Corps of Engineers
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

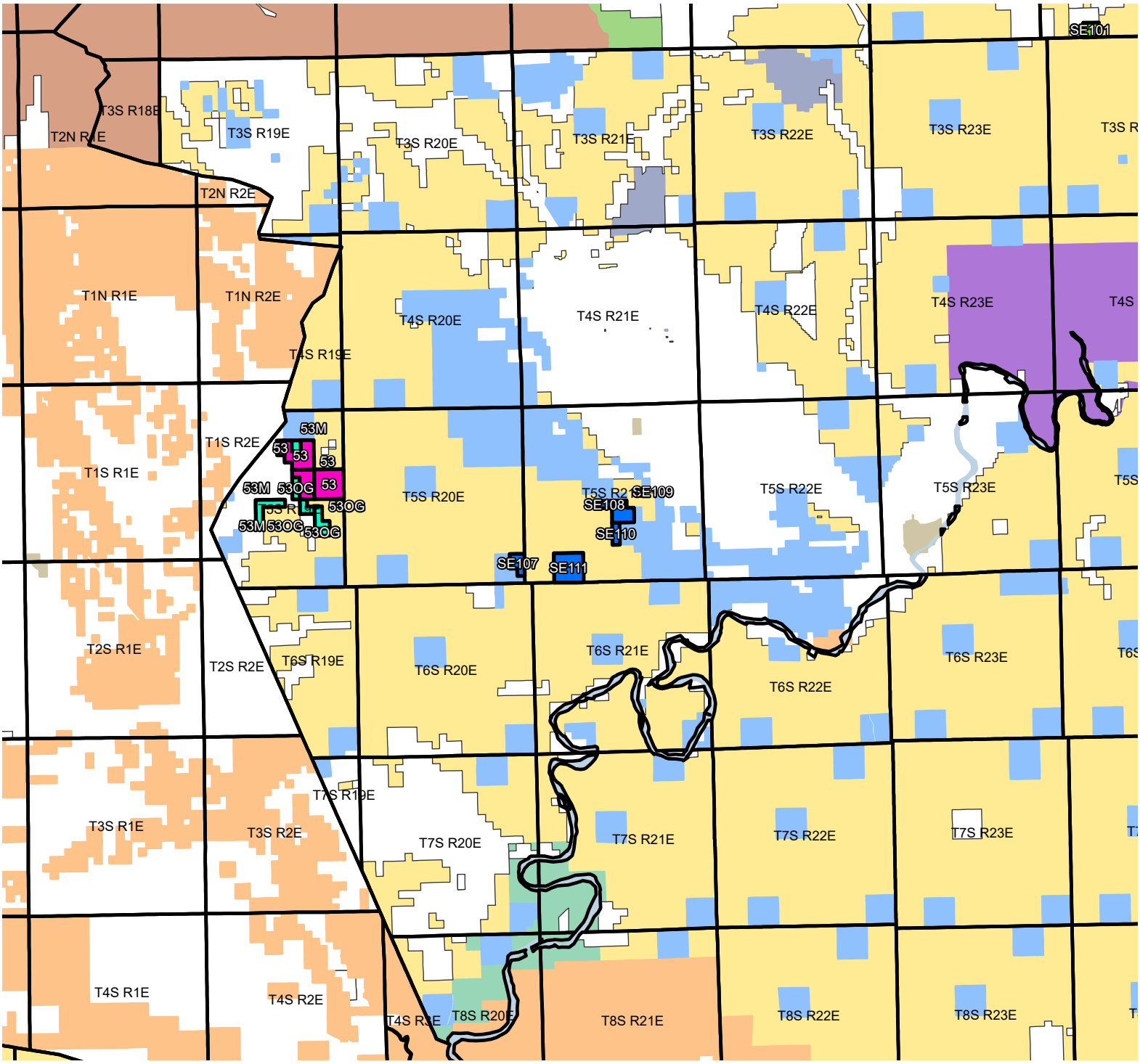
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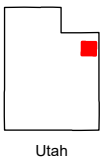
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page			
53	53OG	SE108	SE111
53M	SE101	SE109	
	SE107	SE110	



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- Bureau of Reclamation
- National Recreation Area
- National Monument
- National Forest (NFS)
- National Wildlife Refuge
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

BLM and SITLA Parcel Disposition
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

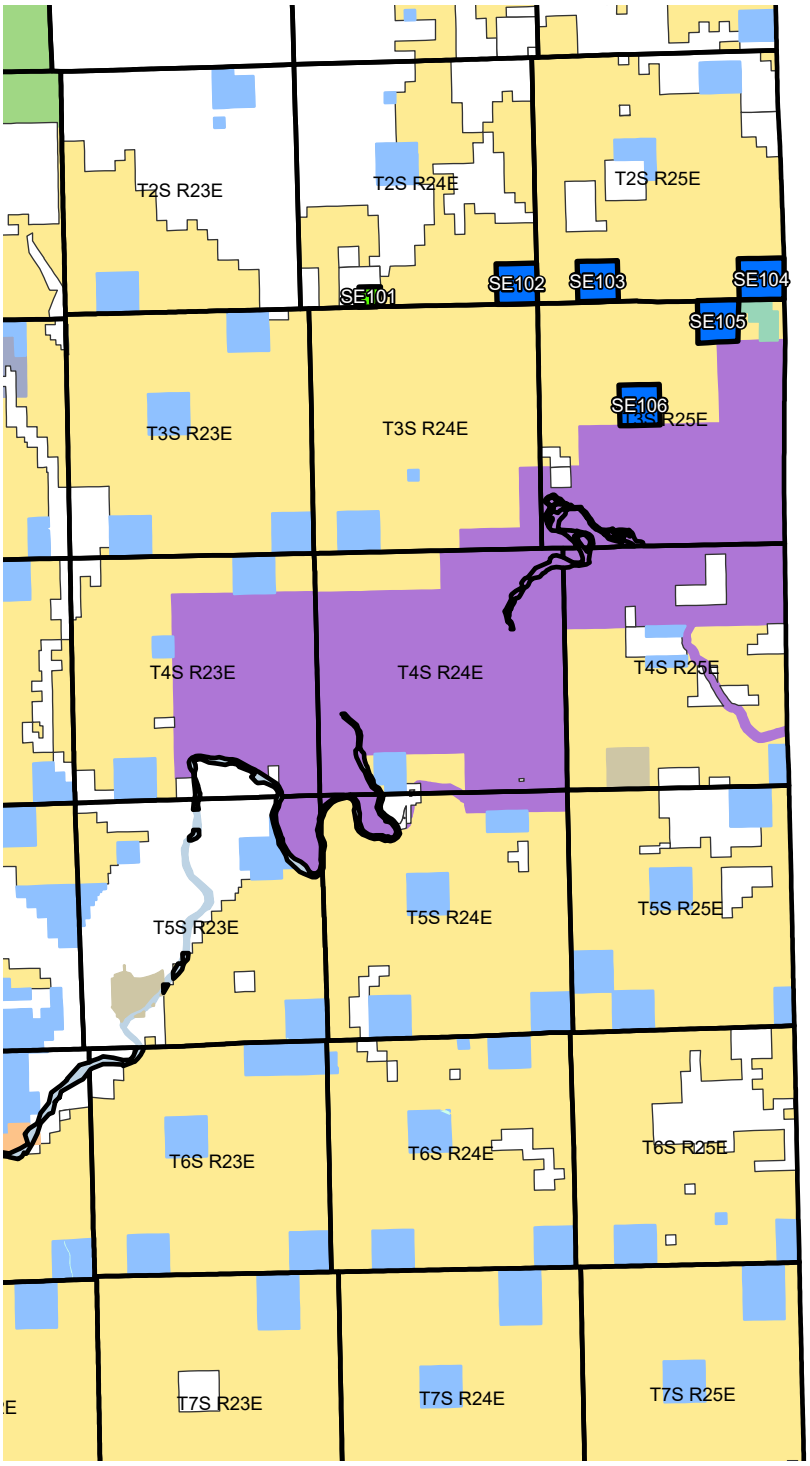
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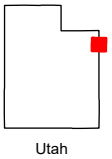
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page	SE103	SE106
SE101	SE104	
SE102	SE105	



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Parks & Historic Sites
- National Monument
- National Forest (NFS)
- National Wildlife Refuge
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

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- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

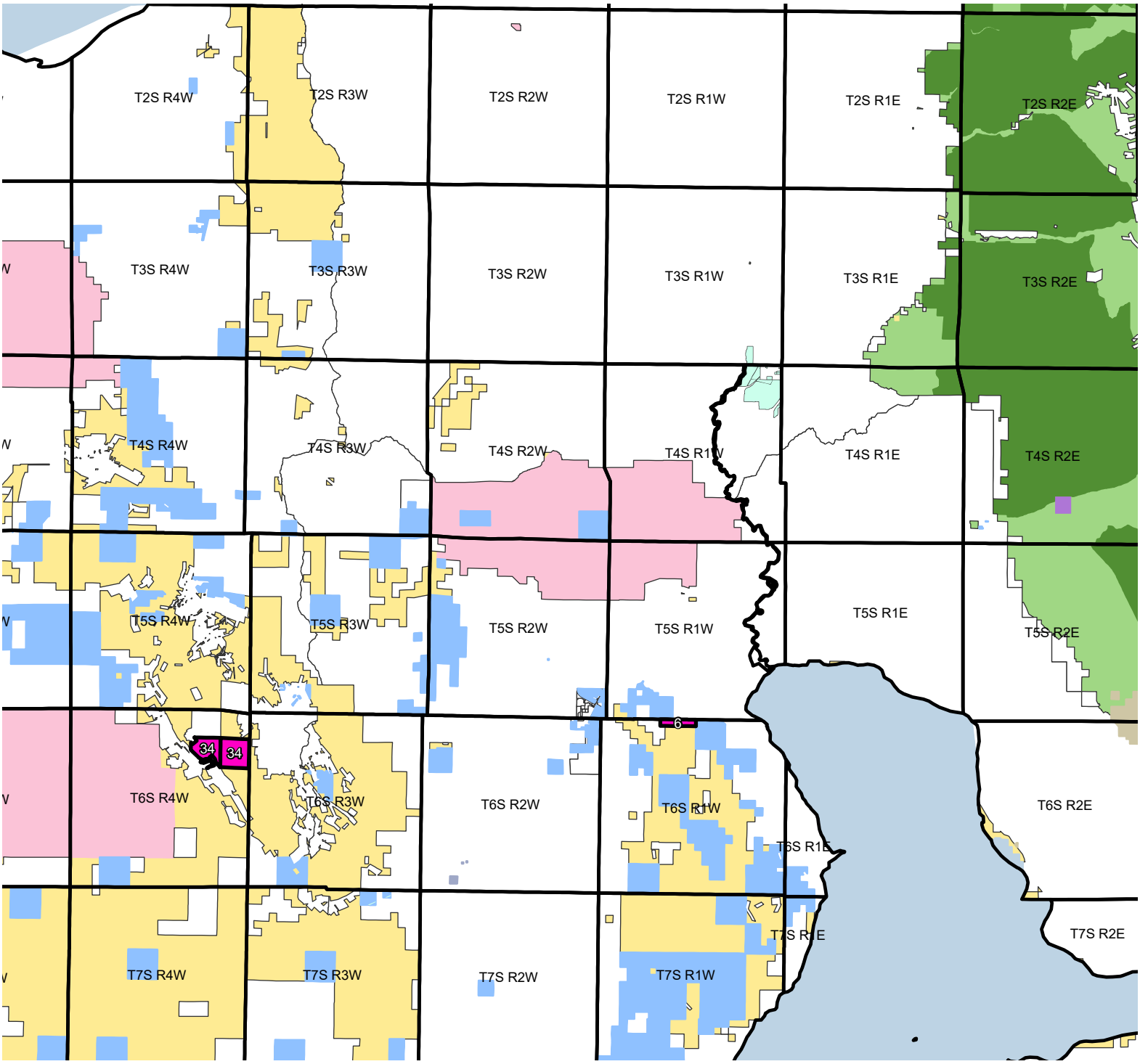
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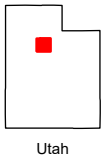
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
34
6



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Monument
- National Forest (NFS)
- National Wilderness Area
- Military Reservations and Corps of Engineers
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

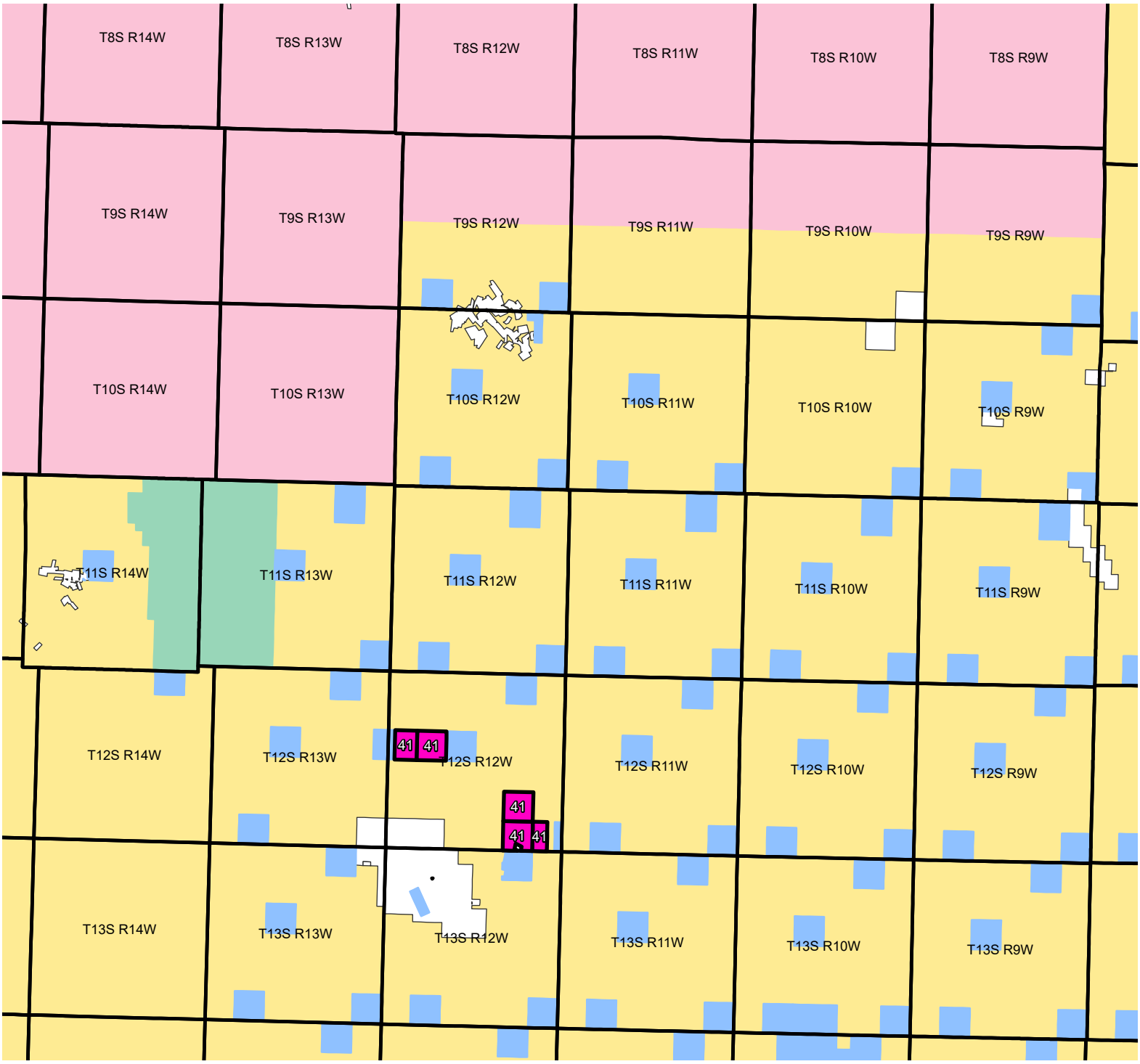
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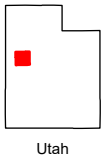
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
41



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Wildlife Refuge
- Military Reservations and Corps of Engineers
- Private
- State Trust Lands

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

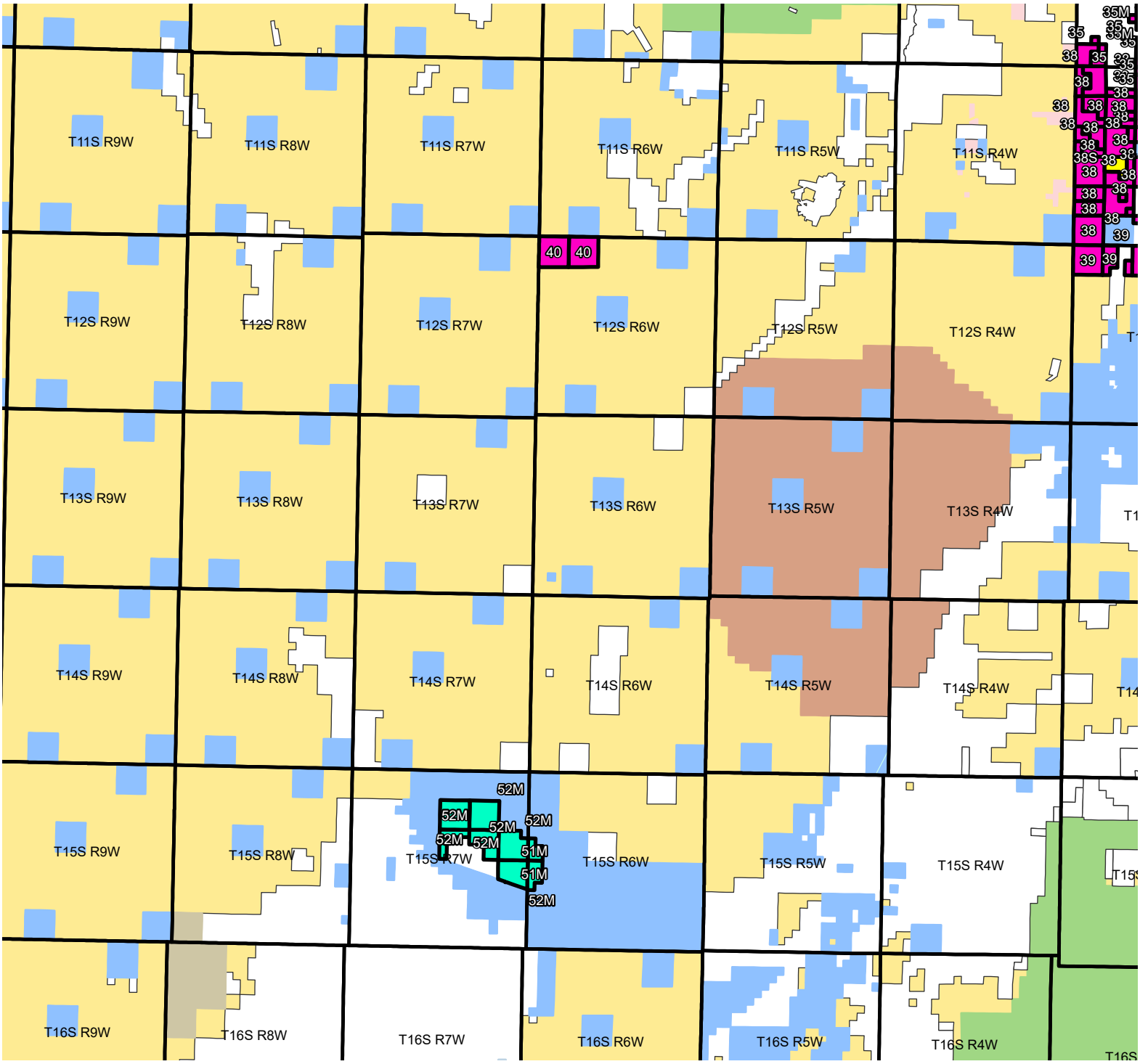
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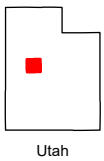
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page	38	40
35	38S	51M
35M	39	52M



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- Bankhead-Jones Land Use Lands
- National Recreation Area
- National Forest (NFS)
- Private
- State Trust Lands
- State Sovereign Land
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
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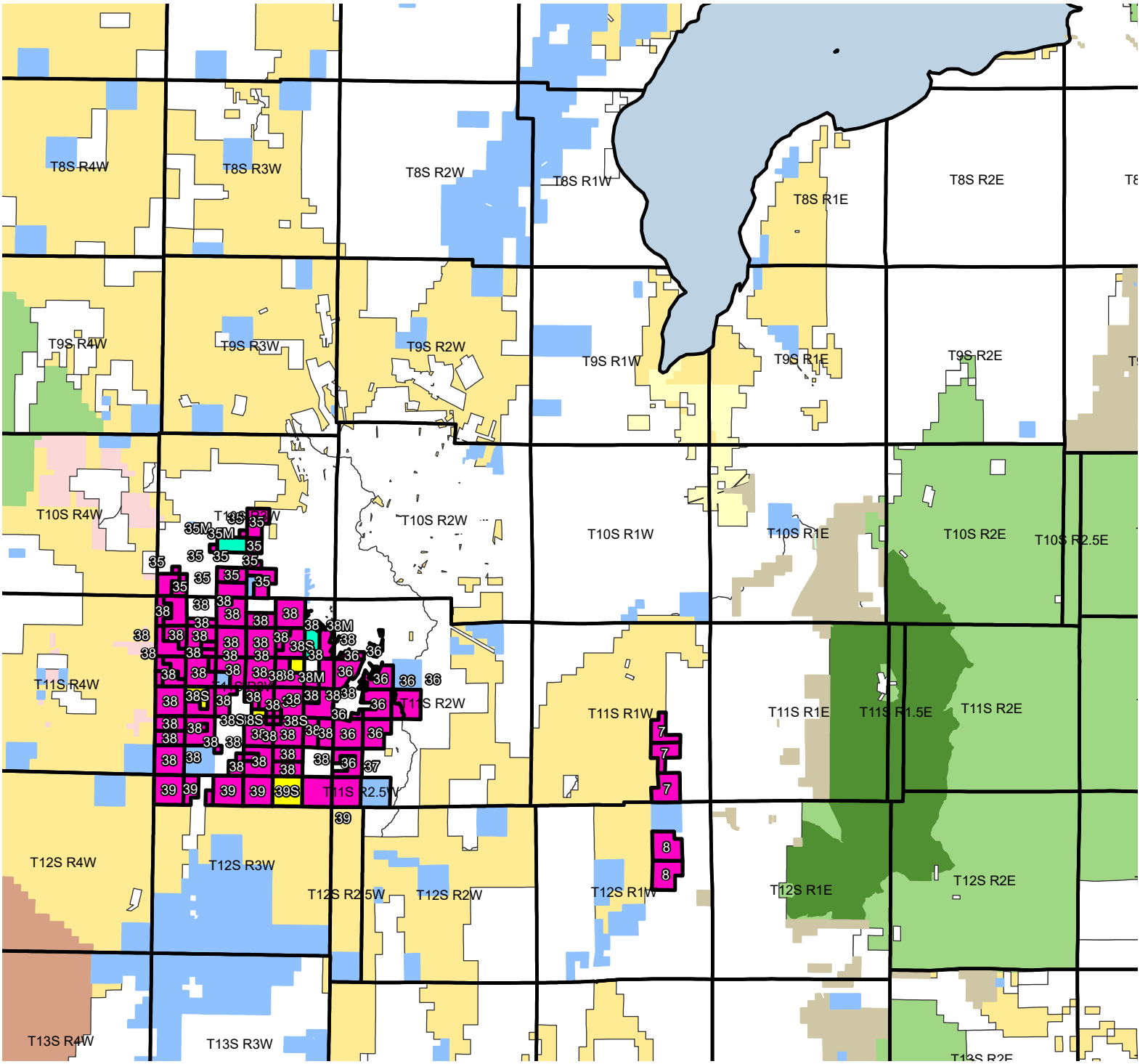
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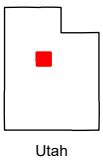
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page			
35	37	38S	7
35M	38	39	8



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- Bureau of Reclamation
- Bankhead-Jones Land Use Lands
- National Recreation Area
- National Forest (NFS)
- National Wilderness Area
- Private
- State Trust Lands
- State Sovereign Land
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
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- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

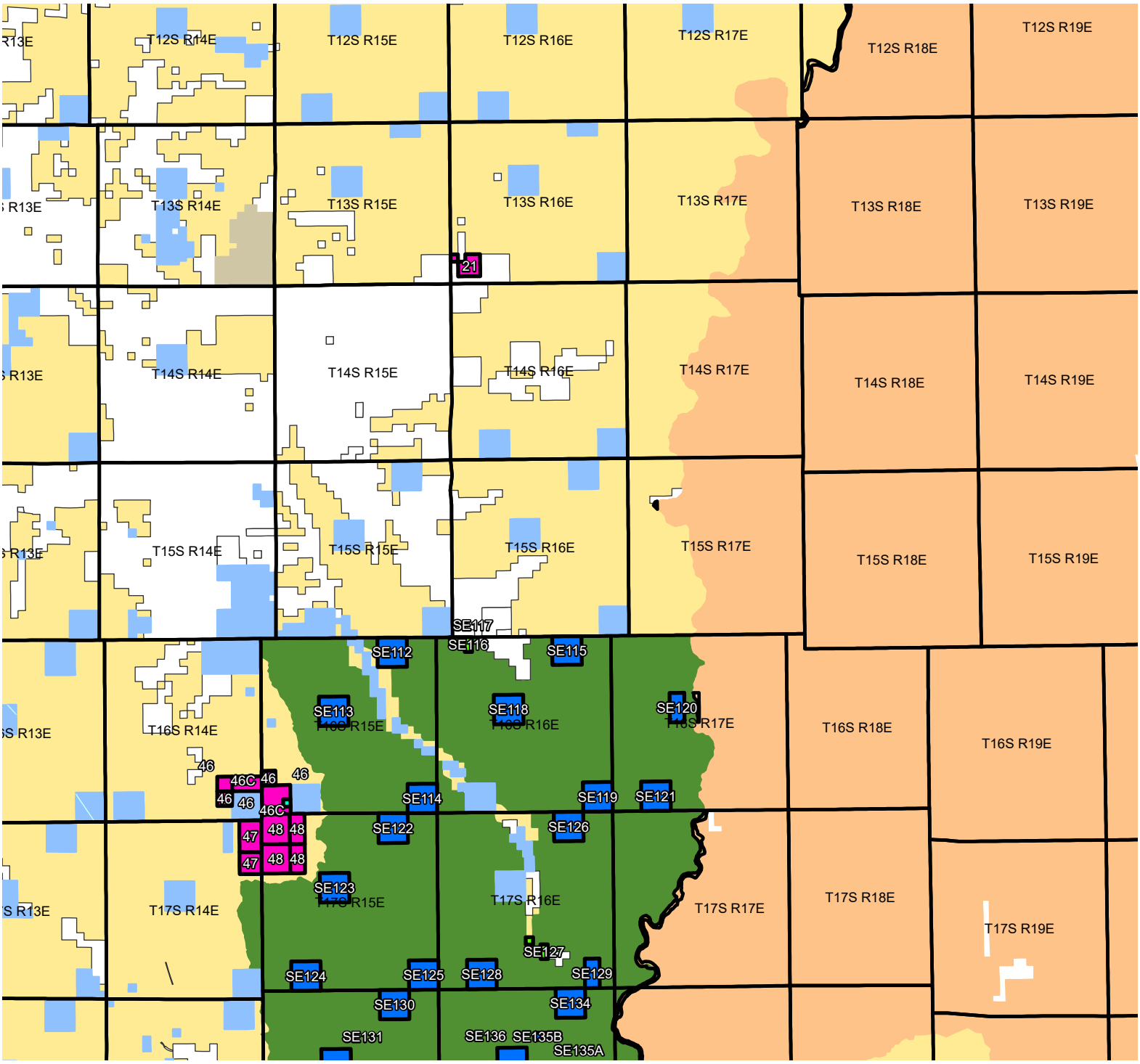
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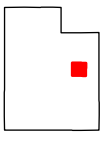
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page					
21	SE112	SE117	SE122	SE127	SE134
46	SE113	SE118	SE123	SE128	SE135A
46C	SE114	SE119	SE124	SE129	SE135B
47	SE115	SE120	SE125	SE130	SE136
48	SE116	SE121	SE126	SE131	



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Wilderness Area
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

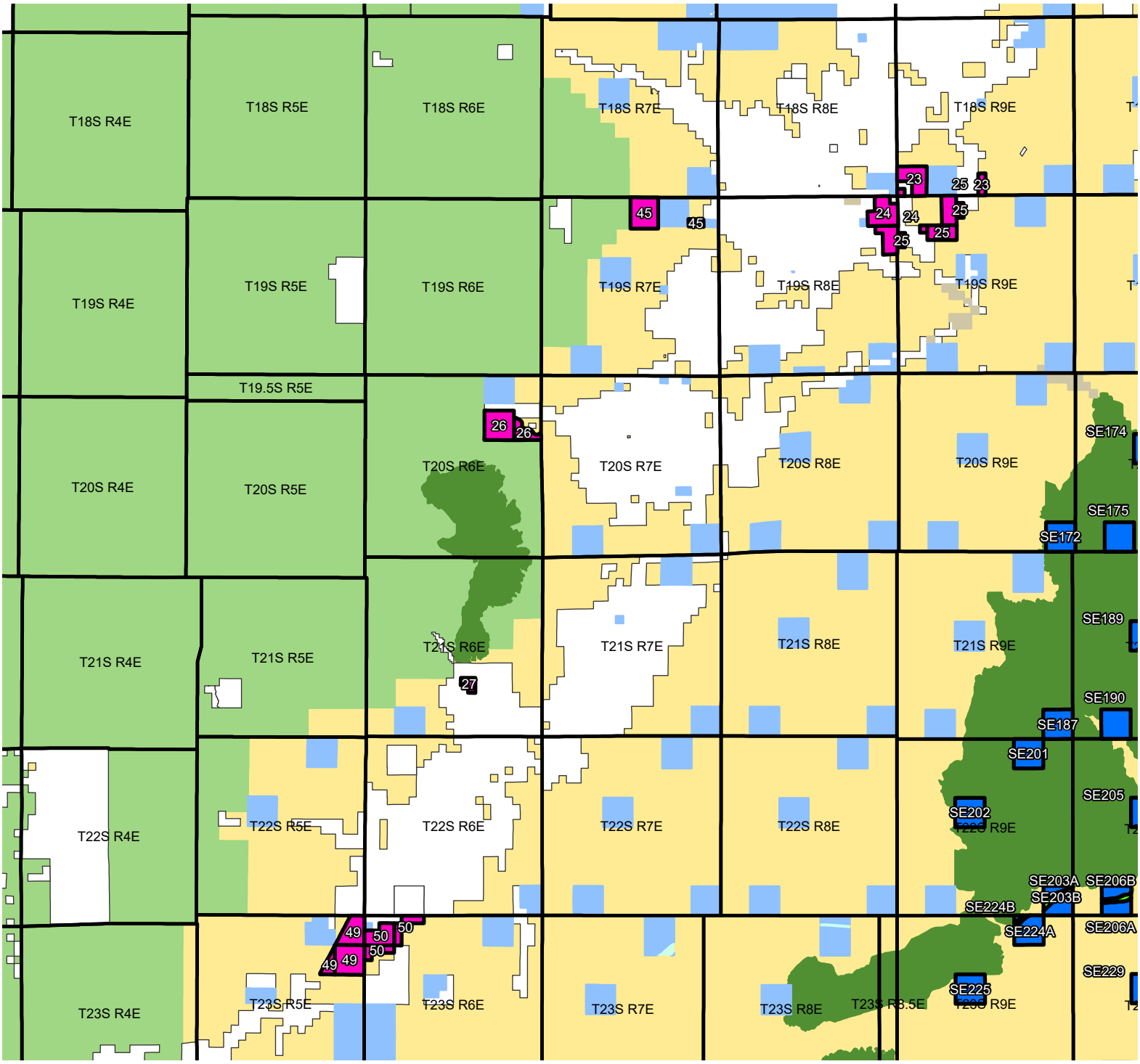
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0 1 2 4 Miles

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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page					
23	45	SE175	SE202	SE206B	
24	49	SE187	SE203A	SE224A	
25	50	SE189	SE203B	SE224B	
26	SE172	SE190	SE205	SE225	

Utah

Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Forest (NFS)
- National Wilderness Area
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
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- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

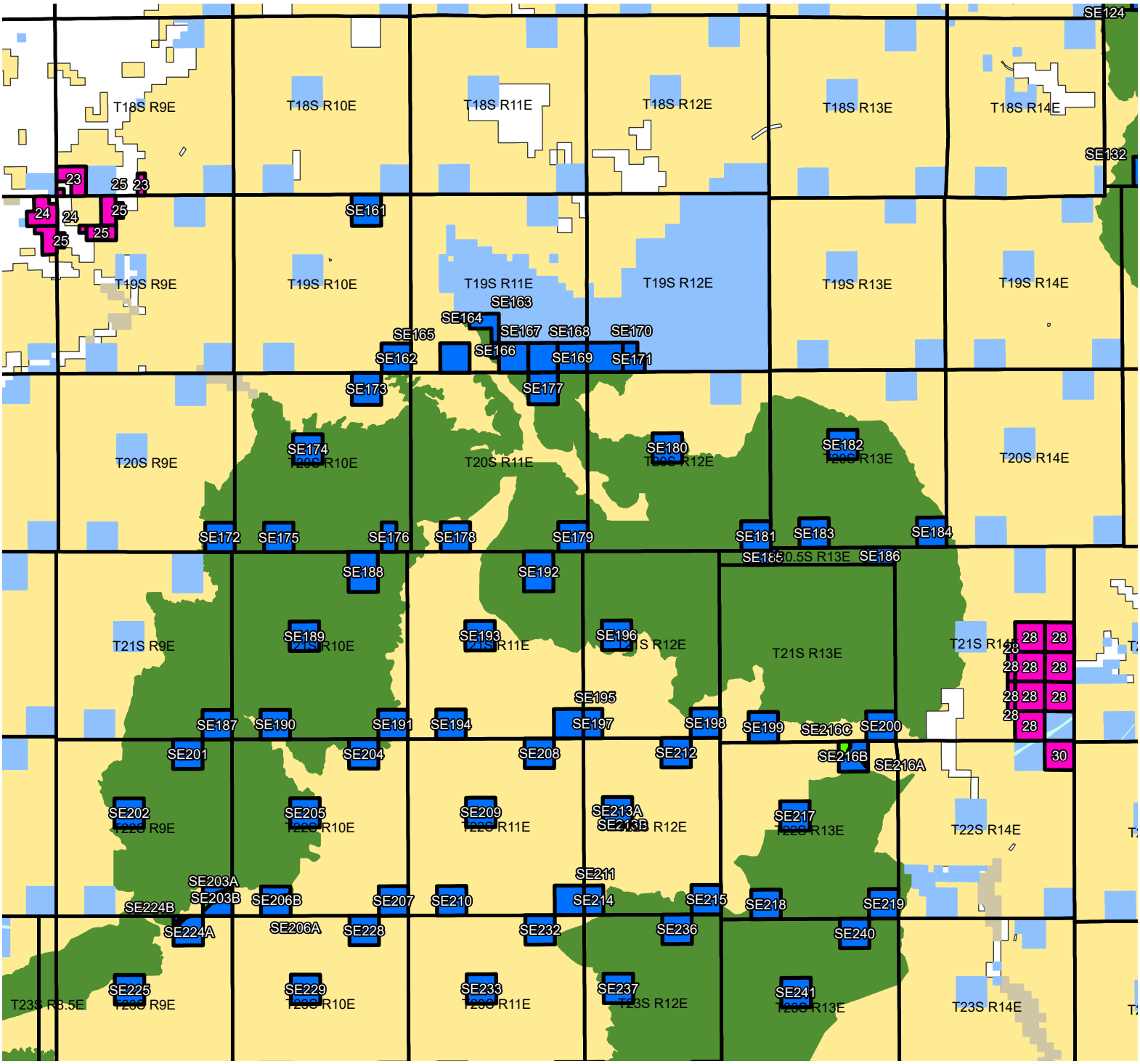
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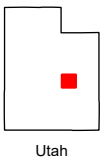
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page											
23	SE132	SE167	SE174	SE181	SE188	SE195	SE202	SE207	SE213B	SE218	SE232
24	SE161	SE168	SE175	SE182	SE189	SE196	SE203A	SE208	SE214	SE219	SE233
25	SE162	SE169	SE176	SE183	SE190	SE197	SE203B	SE209	SE215	SE224A	SE236
28	SE163	SE170	SE177	SE184	SE191	SE198	SE204	SE210	SE216A	SE224B	SE237
30	SE164	SE171	SE178	SE185	SE192	SE199	SE205	SE211	SE216B	SE225	SE240
SE124	SE165	SE172	SE179	SE186	SE193	SE200	SE206A	SE212	SE216C	SE228	SE241
	SE166	SE173	SE180	SE187	SE194	SE201	SE206B	SE213A	SE217	SE229	



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Wilderness Area
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

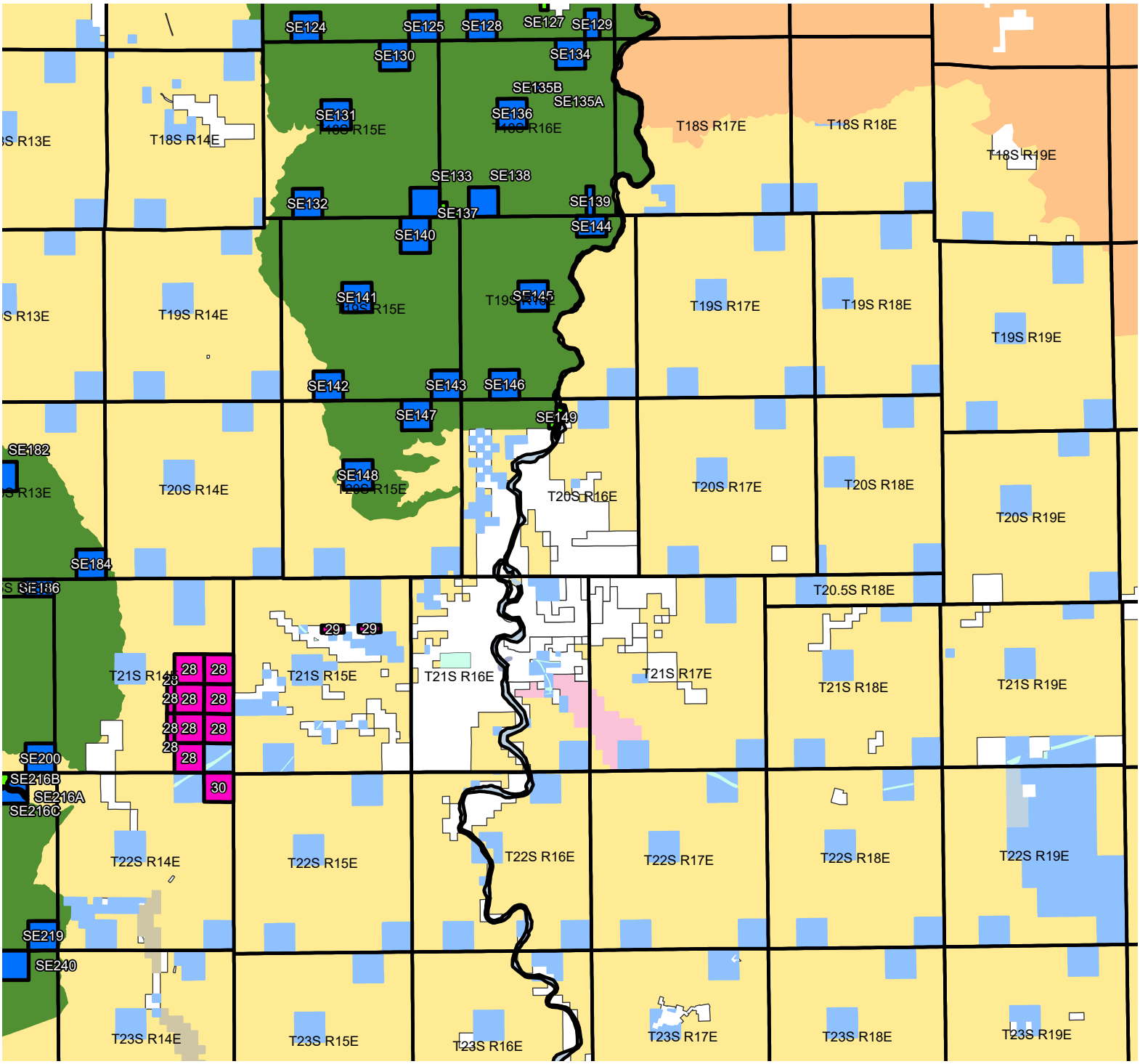
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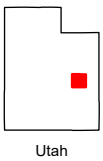
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August 16, 2023

Surface Ownership and Administration Map



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28	SE125	SE131	SE135B	SE140	SE145	SE182	SE216B
29	SE127	SE132	SE136	SE141	SE146	SE184	SE216C
30	SE128	SE133	SE137	SE142	SE147	SE186	SE219
SE124	SE129	SE134	SE138	SE143	SE148	SE200	SE240
	SE130	SE135A	SE139	SE144	SE149	SE216A	



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Wilderness Area
- Military Reservations and Corps of Engineers
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

BLM and SITLA Parcel Disposition

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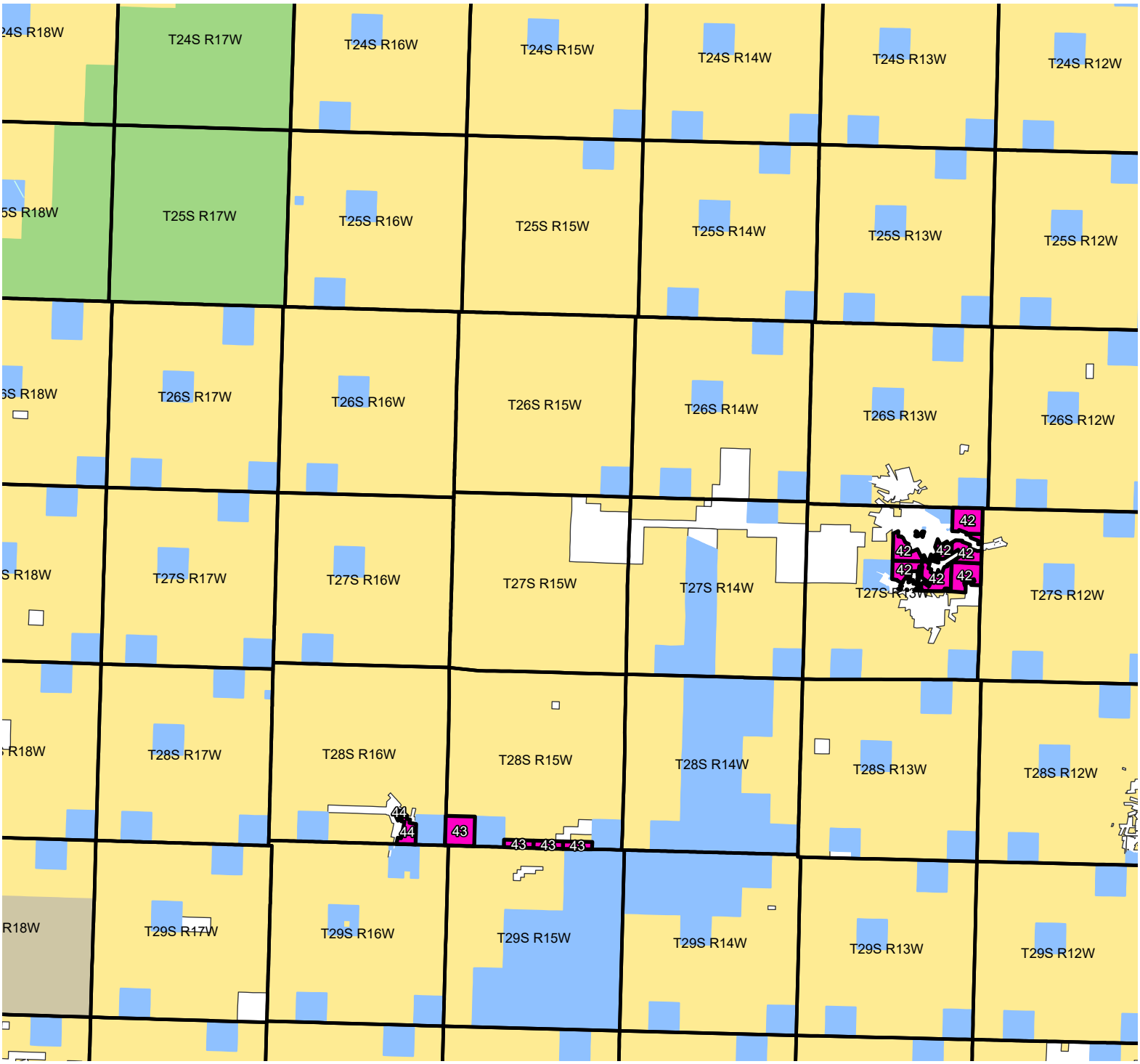
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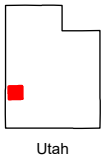
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
42
43
44



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Forest (NFS)
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

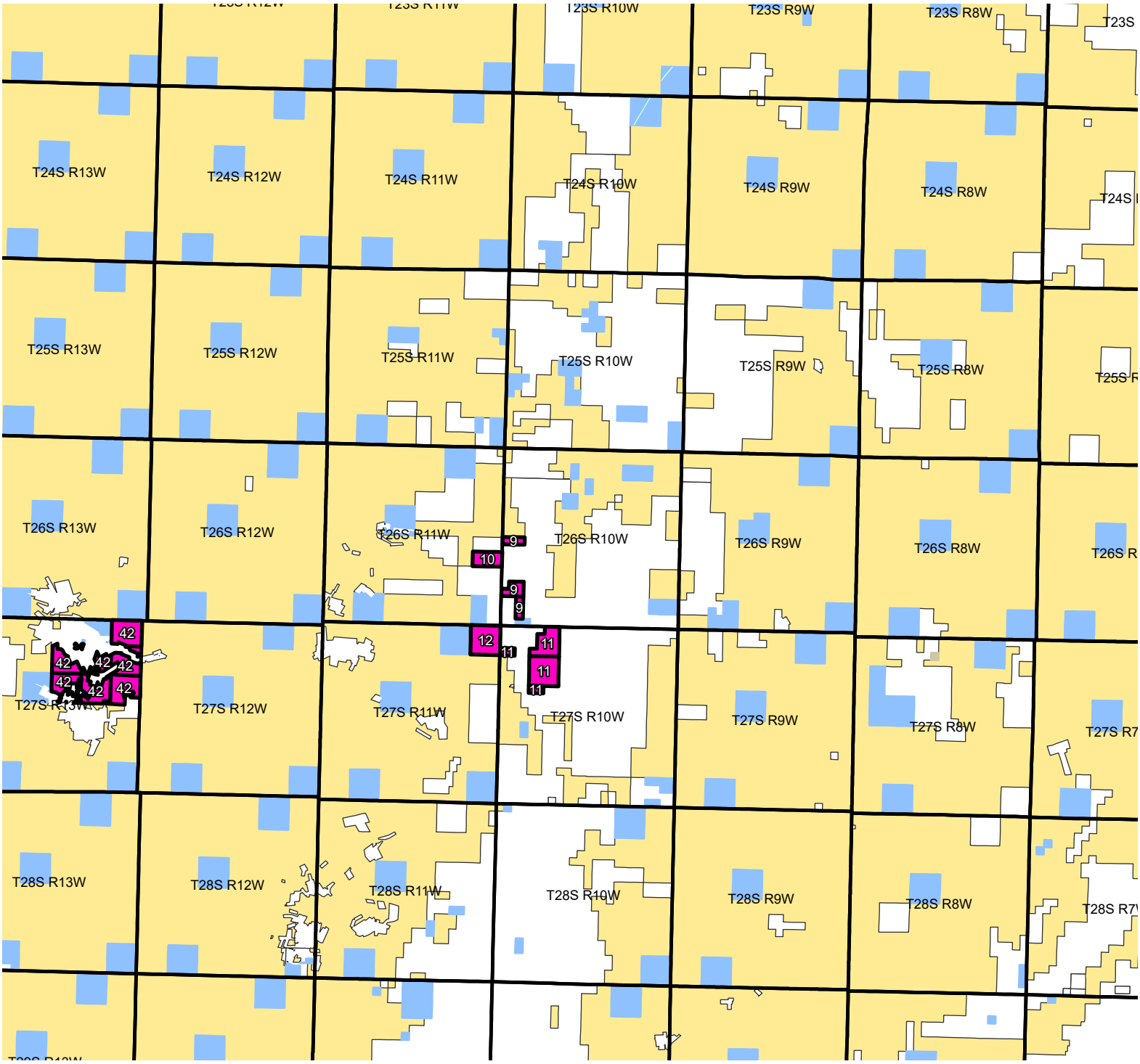
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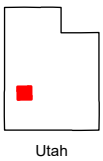
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page		
10	11 12	42 9



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

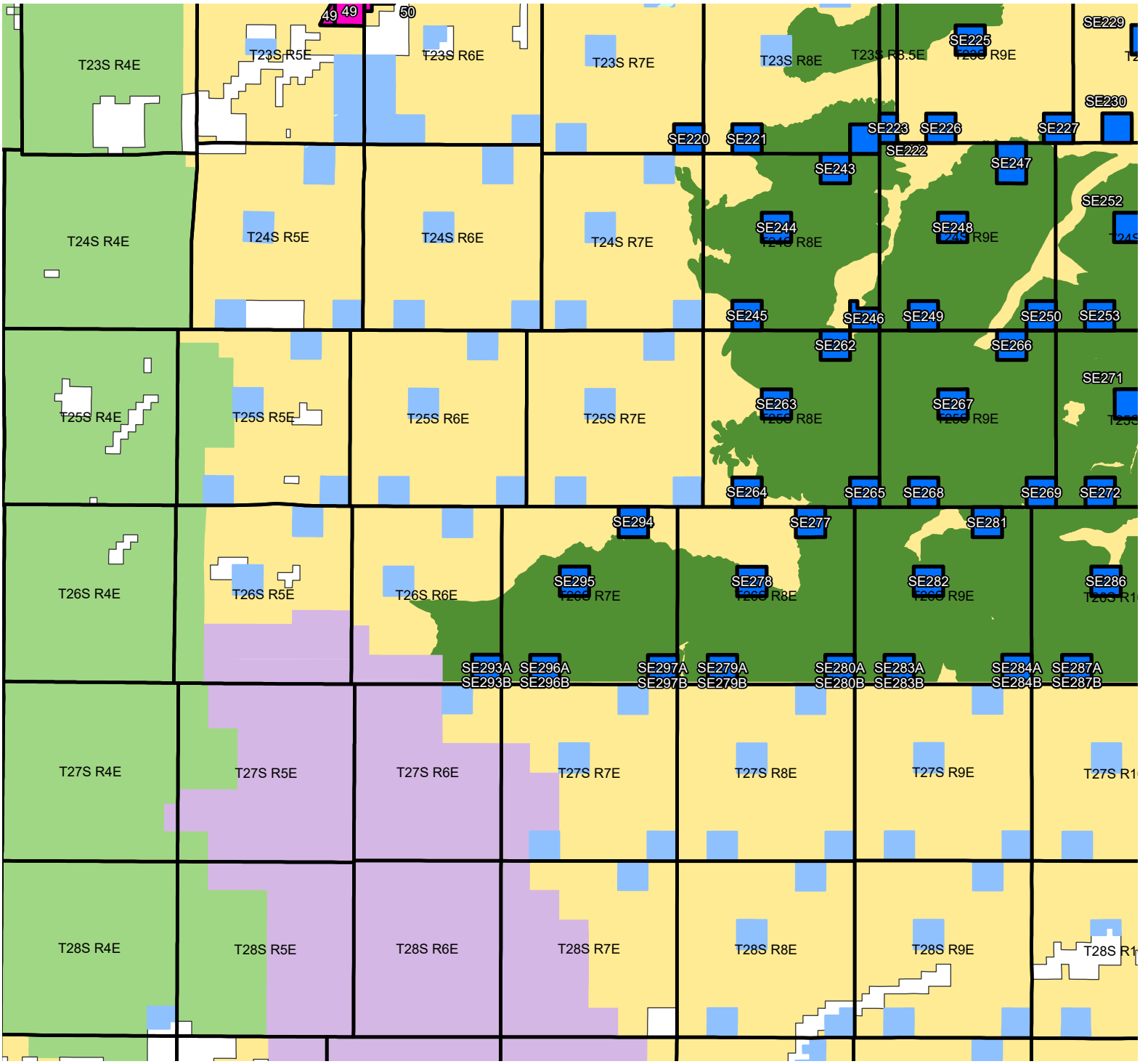
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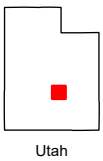
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August 16, 2023

Surface Ownership and Administration Map



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50	SE225	SE244	SE250	SE265	SE272	SE280B	SE284B	SE294	
SE220	SE226	SE245	SE252	SE266	SE277	SE281	SE286	SE295	
SE221	SE227	SE246	SE253	SE267	SE278	SE282	SE287A	SE296A	
SE222	SE229	SE247	SE262	SE268	SE279A	SE283A	SE287B	SE296B	
	SE230	SE248	SE263	SE269	SE279B	SE283B	SE293A	SE297A	



Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Parks & Historic Sites
- National Forest (NFS)
- National Wilderness Area
- Private
- State Trust Lands
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

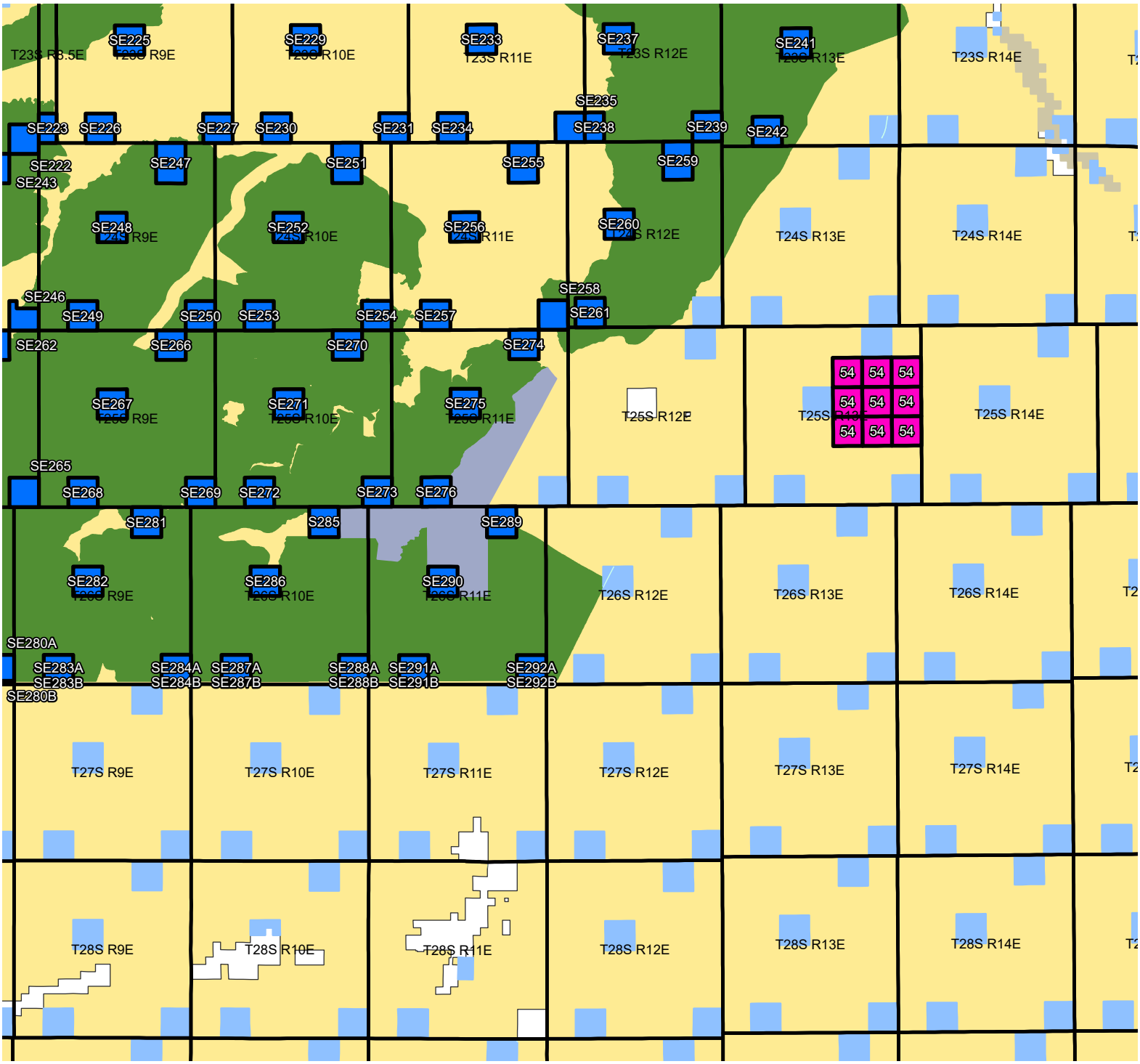
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August 16, 2023

Surface Ownership and Administration Map



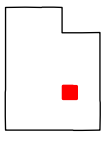
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SE222	SE230	SE239	SE249	SE256	SE265	SE272	SE281	SE287A	SE291B
SE223	SE231	SE241	SE250	SE257	SE266	SE273	SE282	SE287B	SE292A
SE225	SE233	SE242	SE251	SE258	SE267	SE274	SE283A	SE288A	SE292B
SE226	SE234	SE243	SE252	SE259	SE268	SE275	SE283B	SE288B	
	SE235	SE246	SE253	SE260	SE269	SE276	SE284A	SE289	

Surface Ownership and Administration

- Bureau of Land Management (BLM)
- National Wilderness Area
- Private
- State Trust Lands
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel



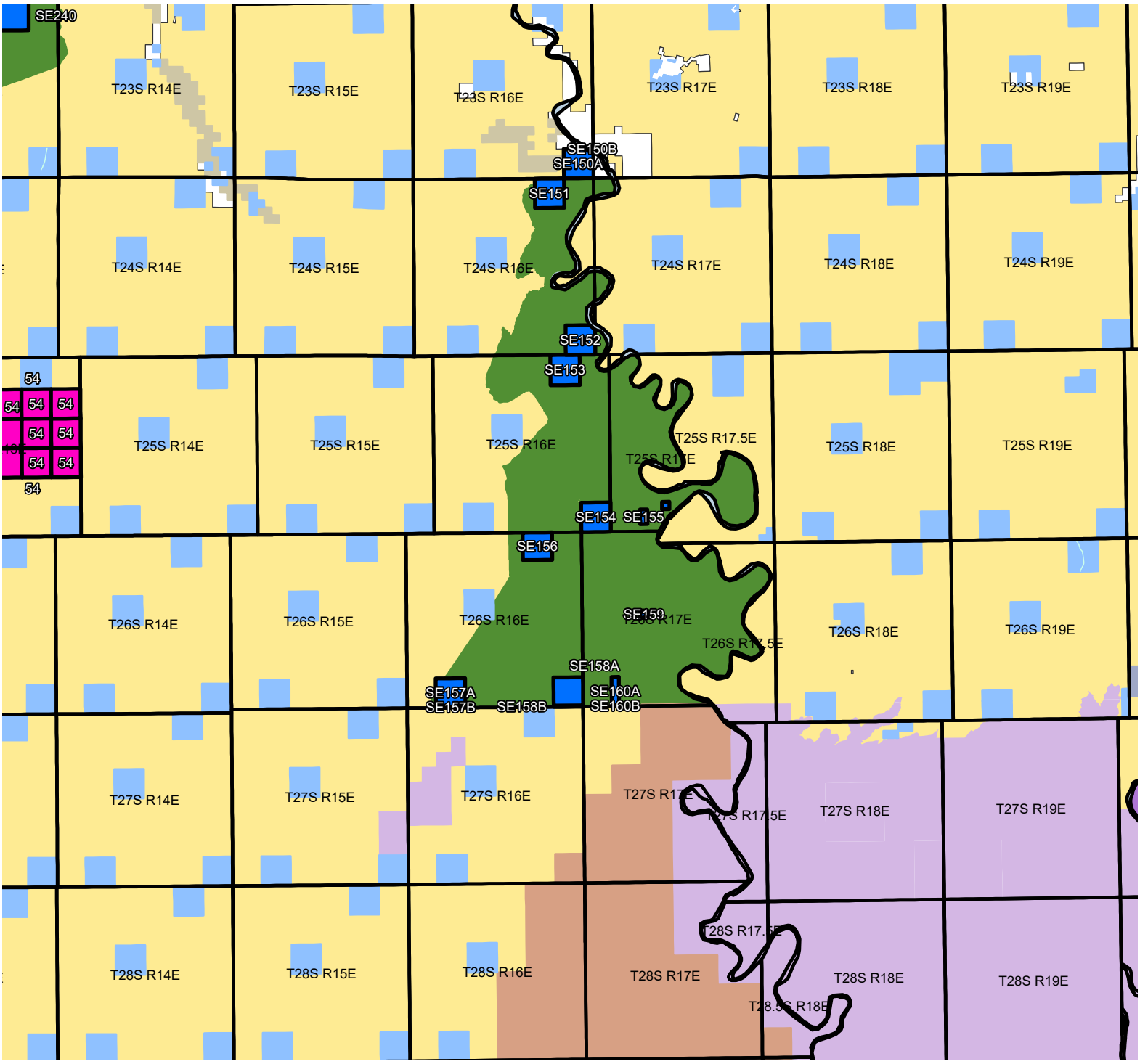
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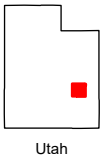
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page				
54	SE151	SE155	SE158A	SE160B
SE150A	SE152	SE156	SE158B	SE240
SE150B	SE153	SE157A	SE159	
	SE154	SE157B	SE160A	



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Recreation Area
- National Parks & Historic Sites
- National Monument
- National Wilderness Area
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

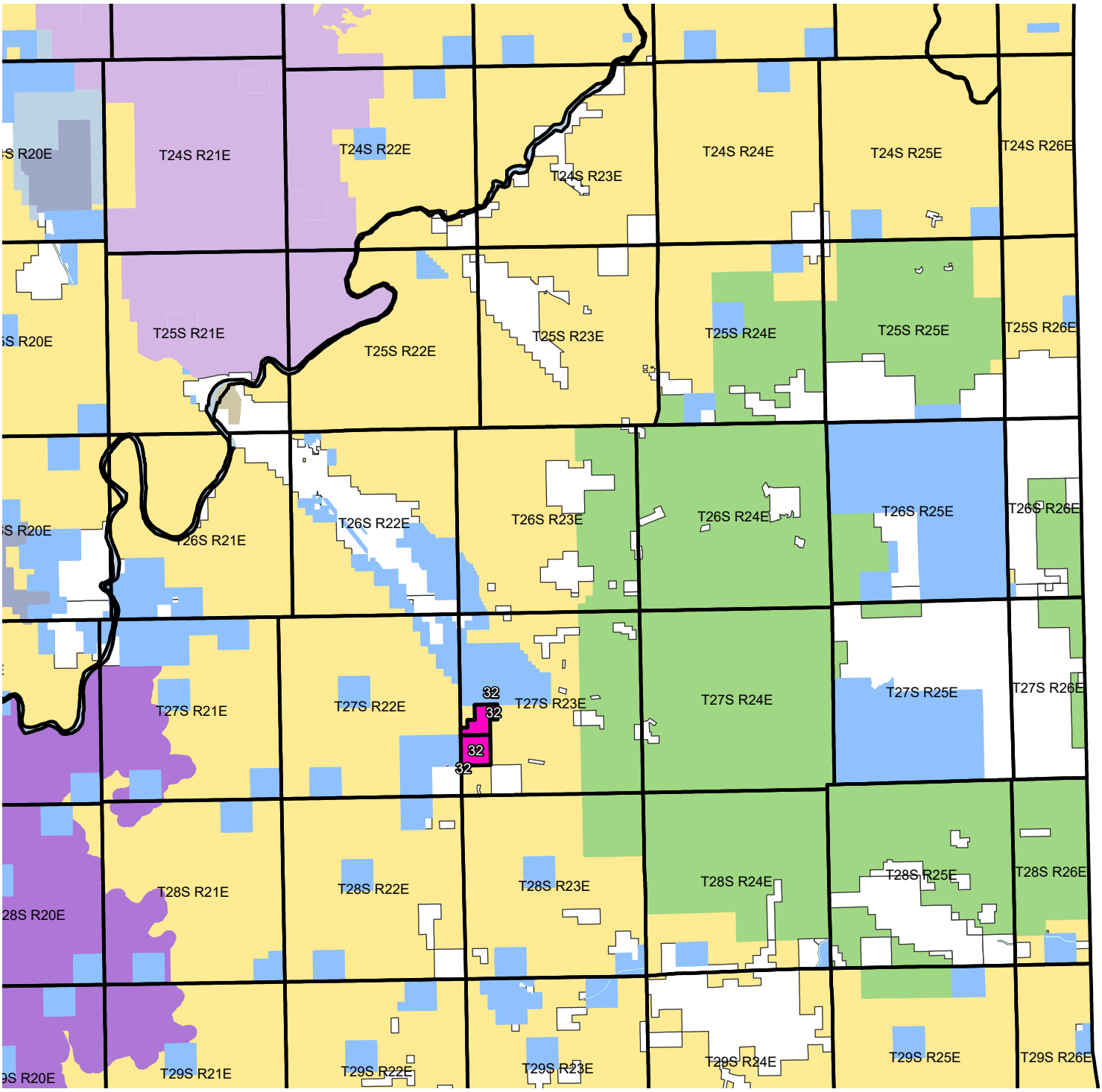
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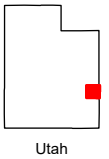
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
32



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Parks & Historic Sites
- National Monument
- National Forest (NFS)
- Private
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

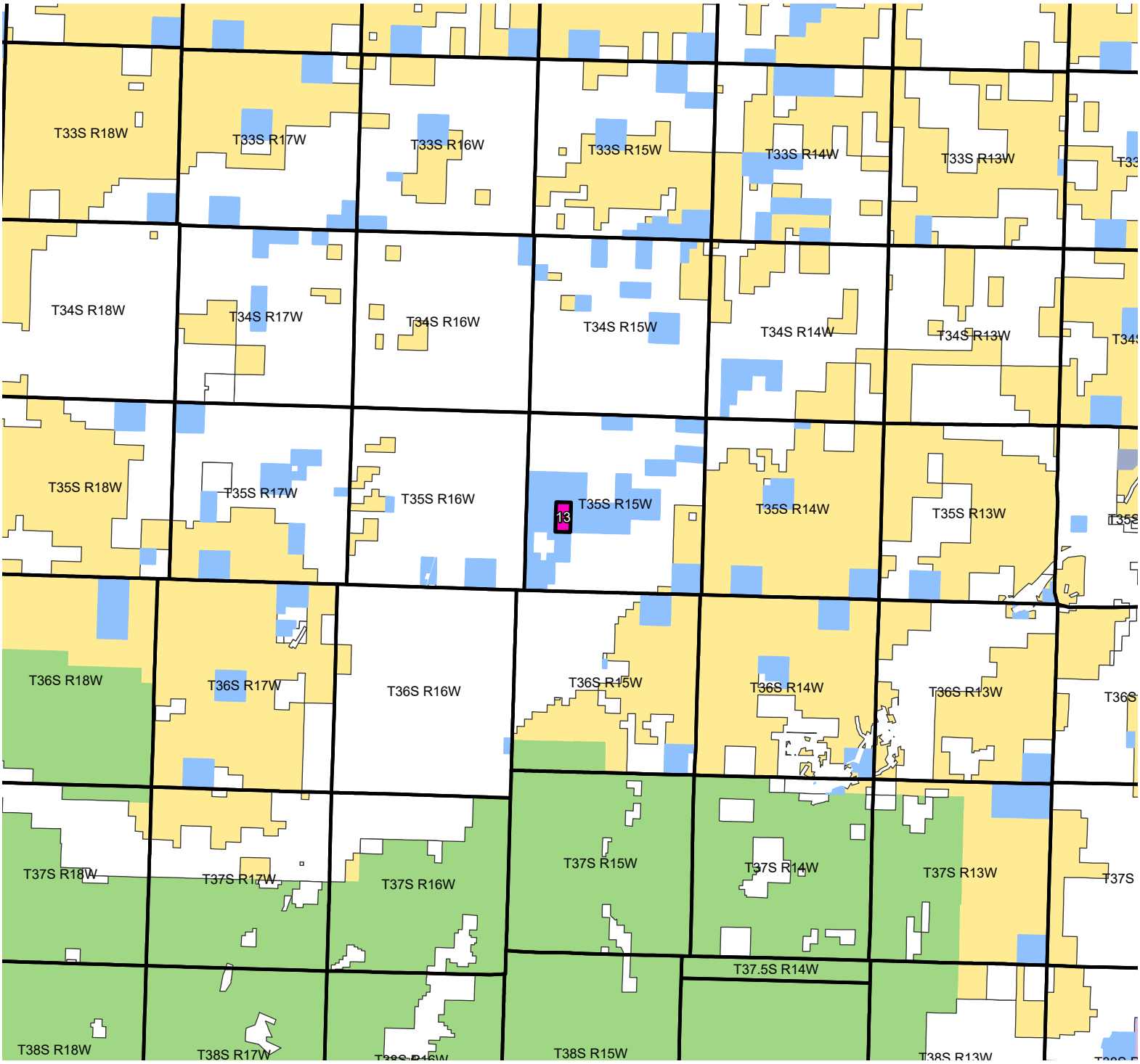
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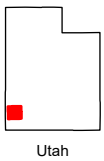
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
13



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Parks & Historic Sites
- National Forest (NFS)
- Private
- State Trust Lands
- State Parks and Recreation

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

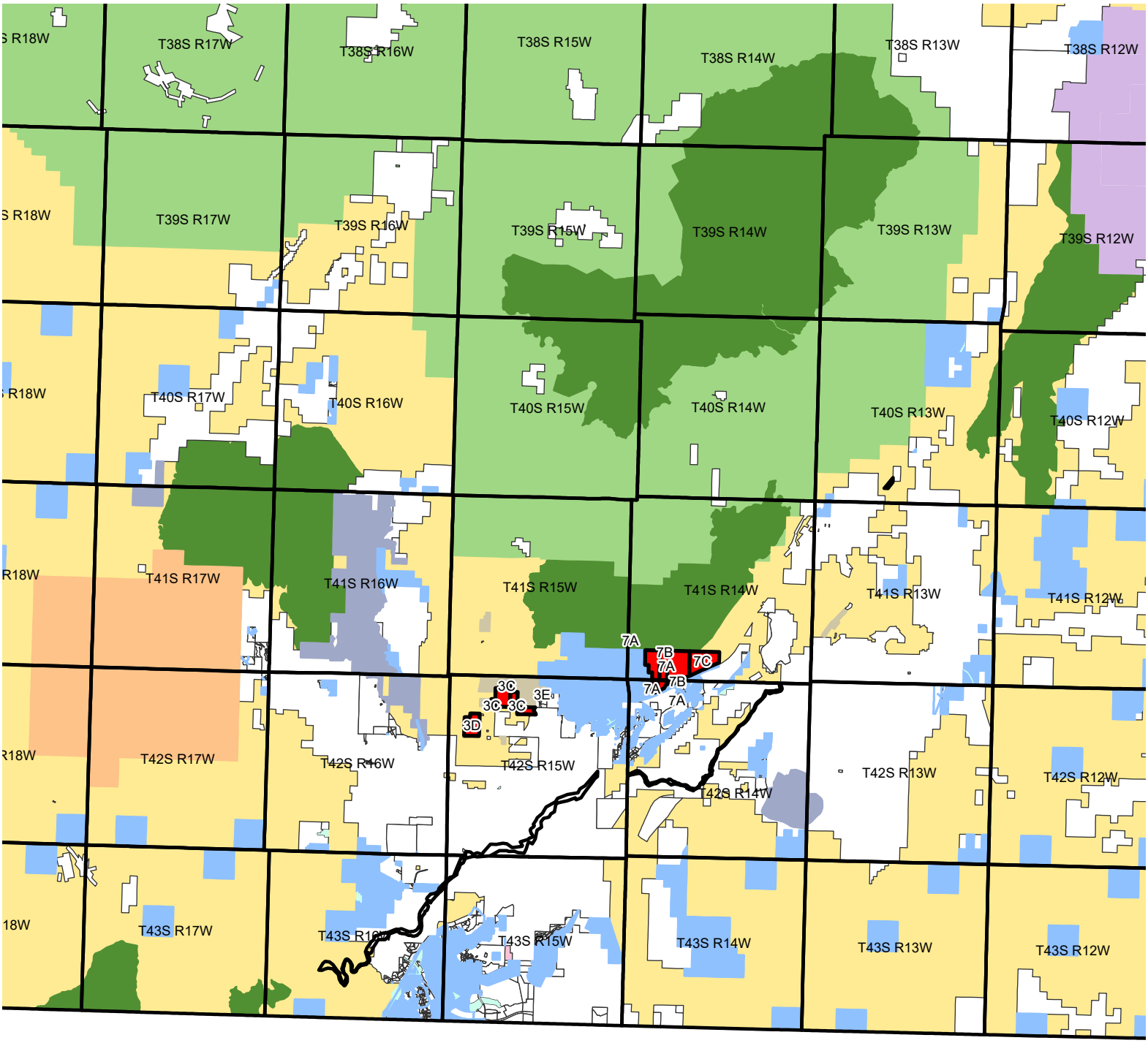
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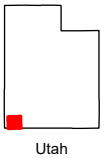
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page		
3C	3E	7C
3D	7A	
	7B	



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Parks & Historic Sites
- National Forest (NFS)
- National Wilderness Area
- Military Reservations and Corps of Engineers
- Private
- State Trust Lands
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

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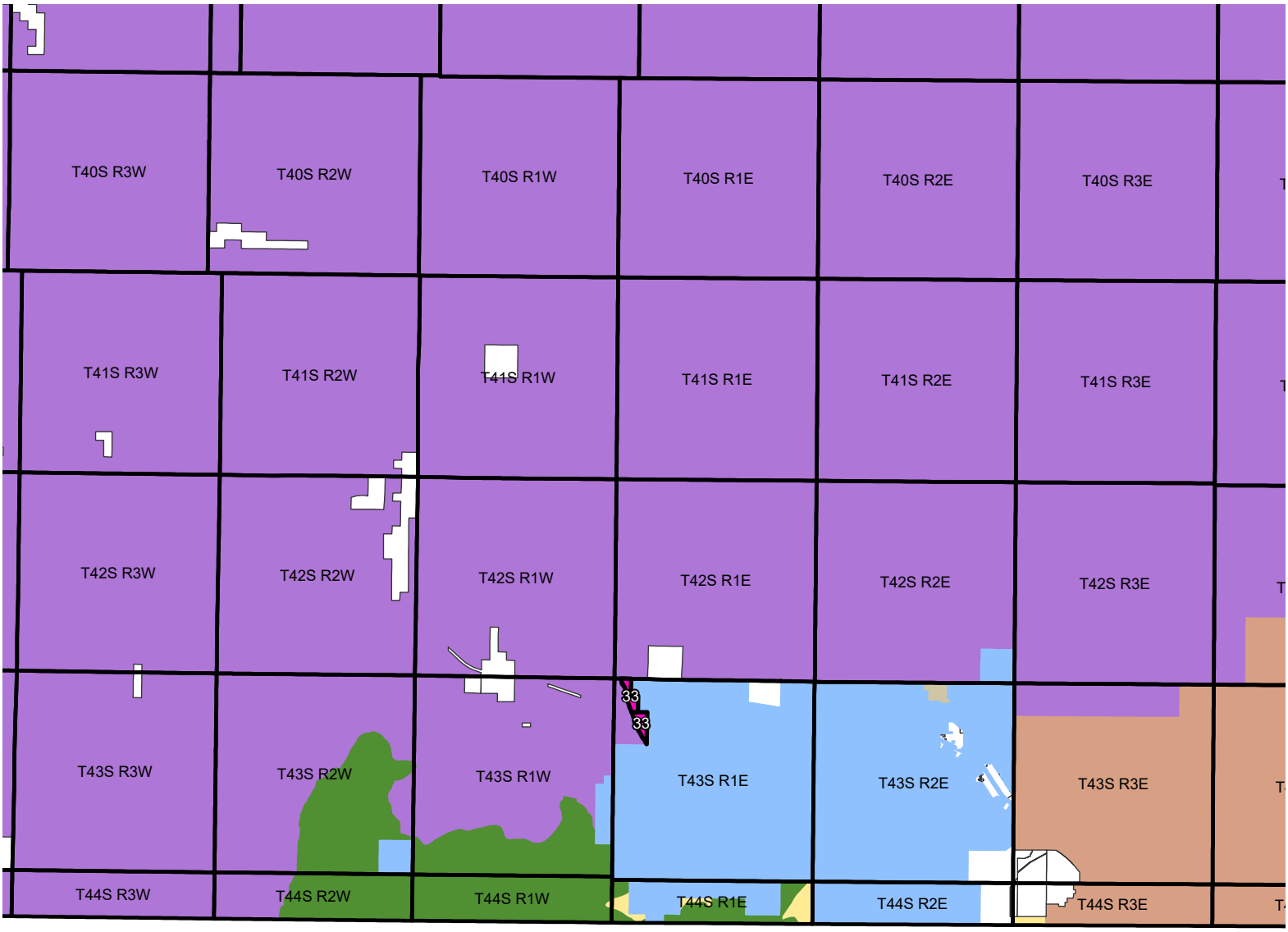
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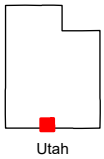
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August 16, 2023

Surface Ownership and Administration Map



Parcel on Current Page
33



Surface Ownership and Administration
- Bureau of Land Management (BLM)
- National Recreation Area
- National Monument
- National Wilderness Area
- Private
- State Trust Lands
- State Wildlife Reserve/Management Area

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- State Offered Equalization Parcel

N

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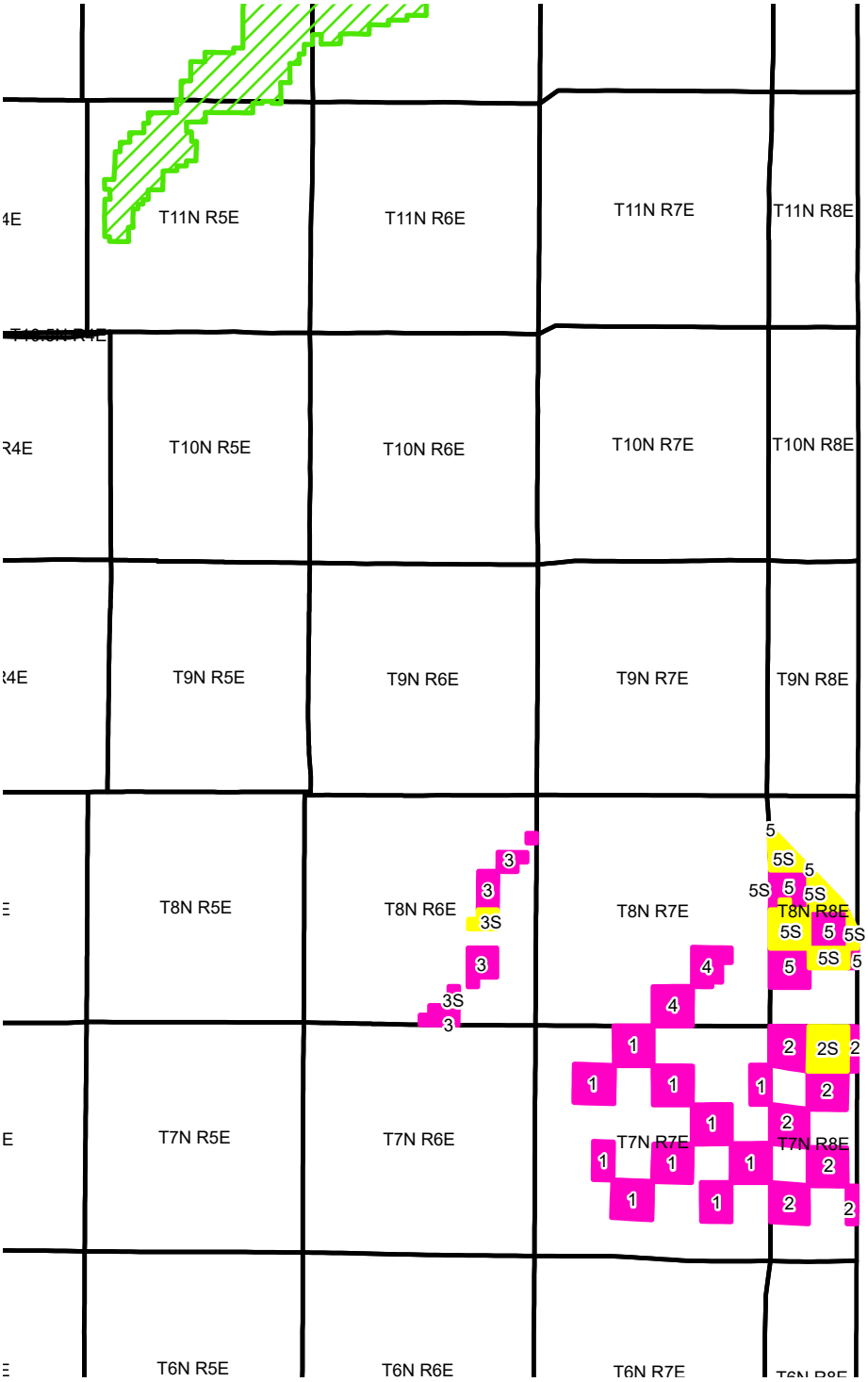
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August 16, 2023

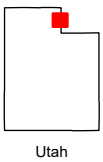
Appendix C Special Designation Lands, Lands with Wilderness Characteristics, and Natural Areas Mapset

September 2023

Special Designation Map



Parcel on Current Page		
	2S	4
1	3	5
2	3S	5S



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

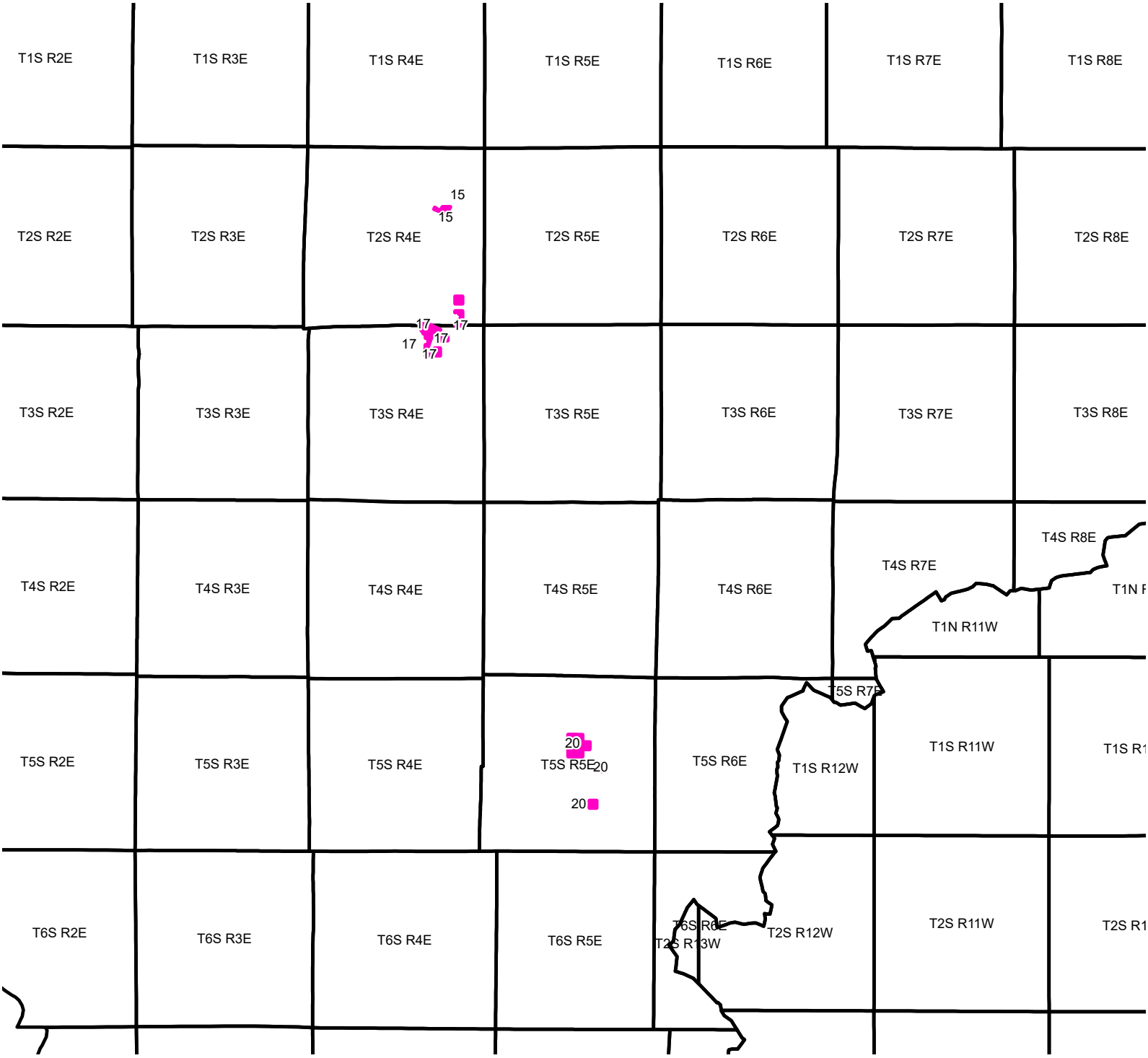
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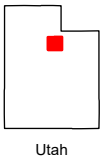
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July 3, 2023

Special Designation Map



Parcel on Current Page
15
17
20



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

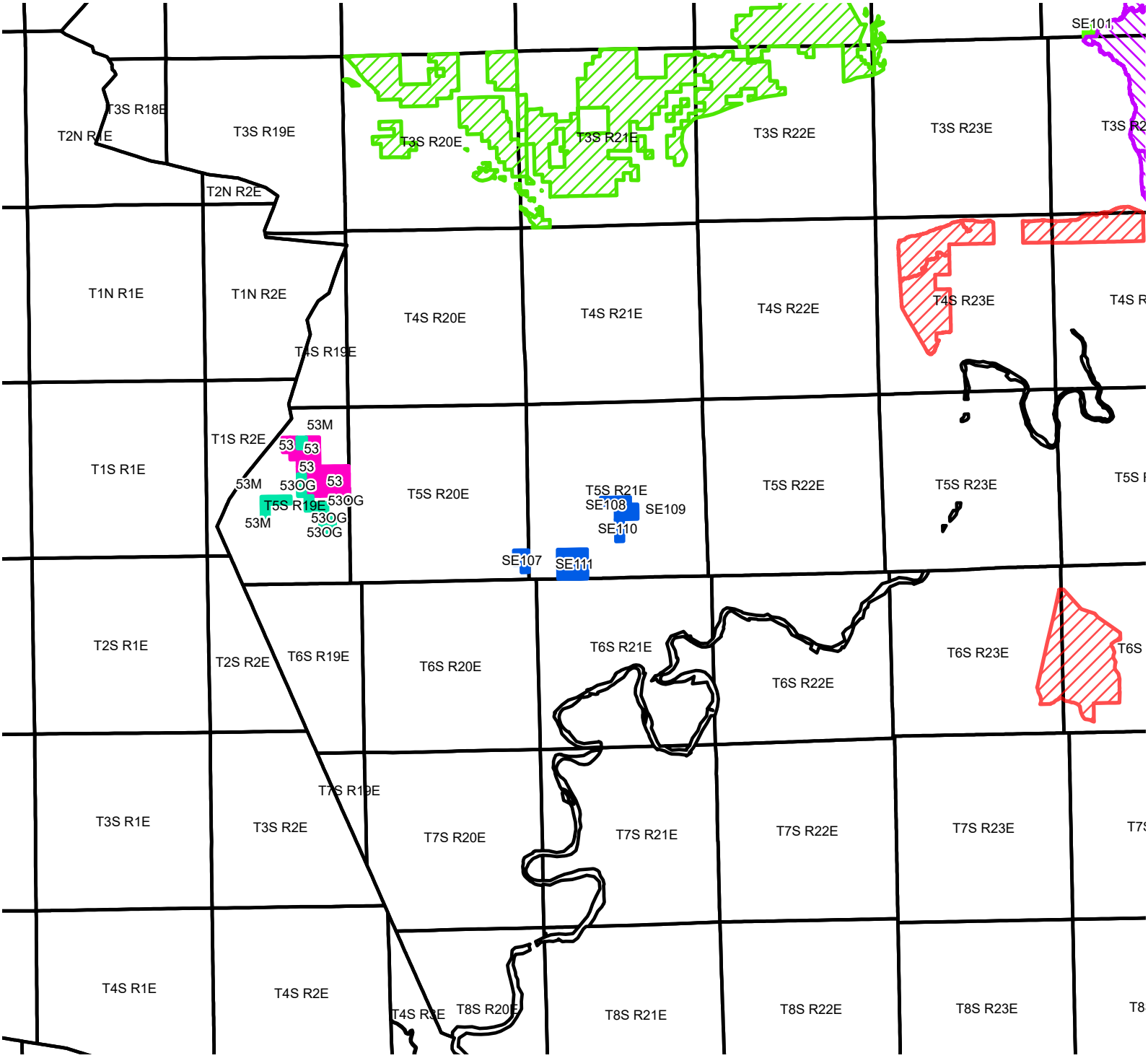
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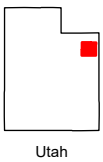
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July 3, 2023

Special Designation Map



Parcel on Current Page			
53	53OG	SE108	SE111
53M	SE101	SE109	
	SE107	SE110	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

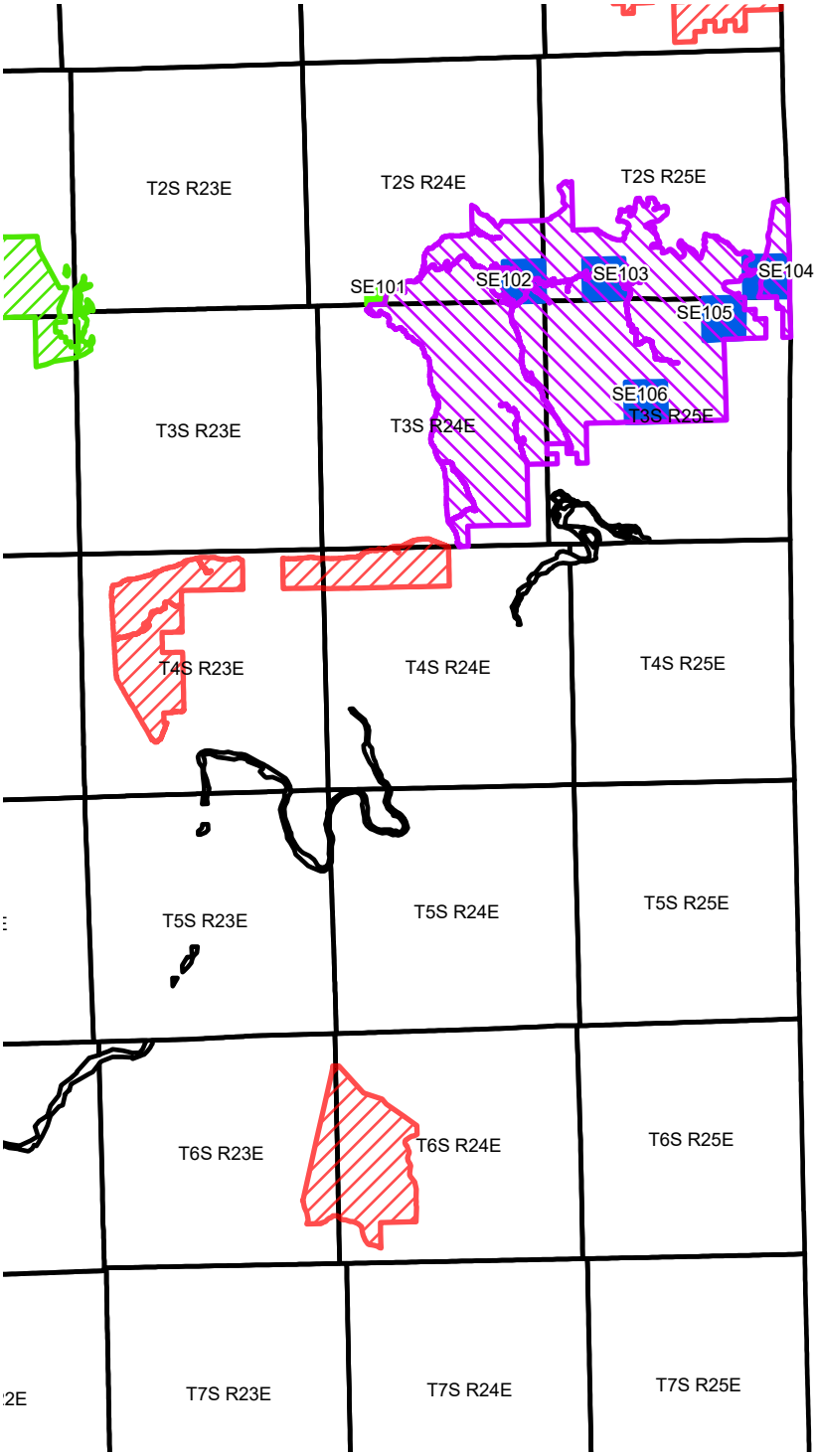
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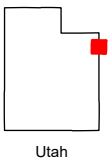
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July 3, 2023

Special Designation Map



Parcel on Current Page		
SE101	SE103	SE106
SE102	SE104	
	SE105	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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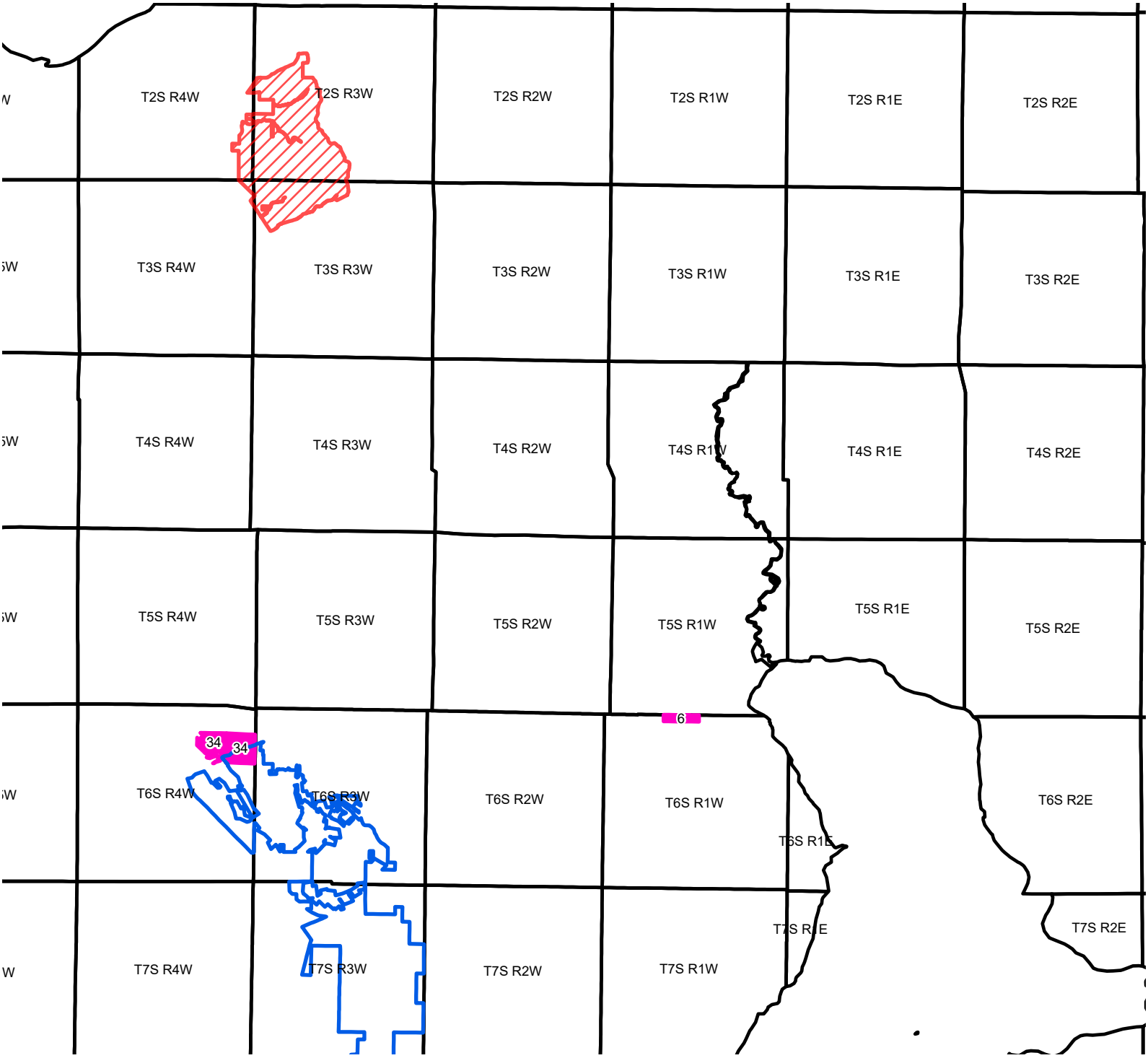
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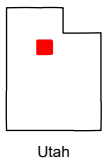
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July 3, 2023

Special Designation Map



Parcel on Current Page
34
6



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition

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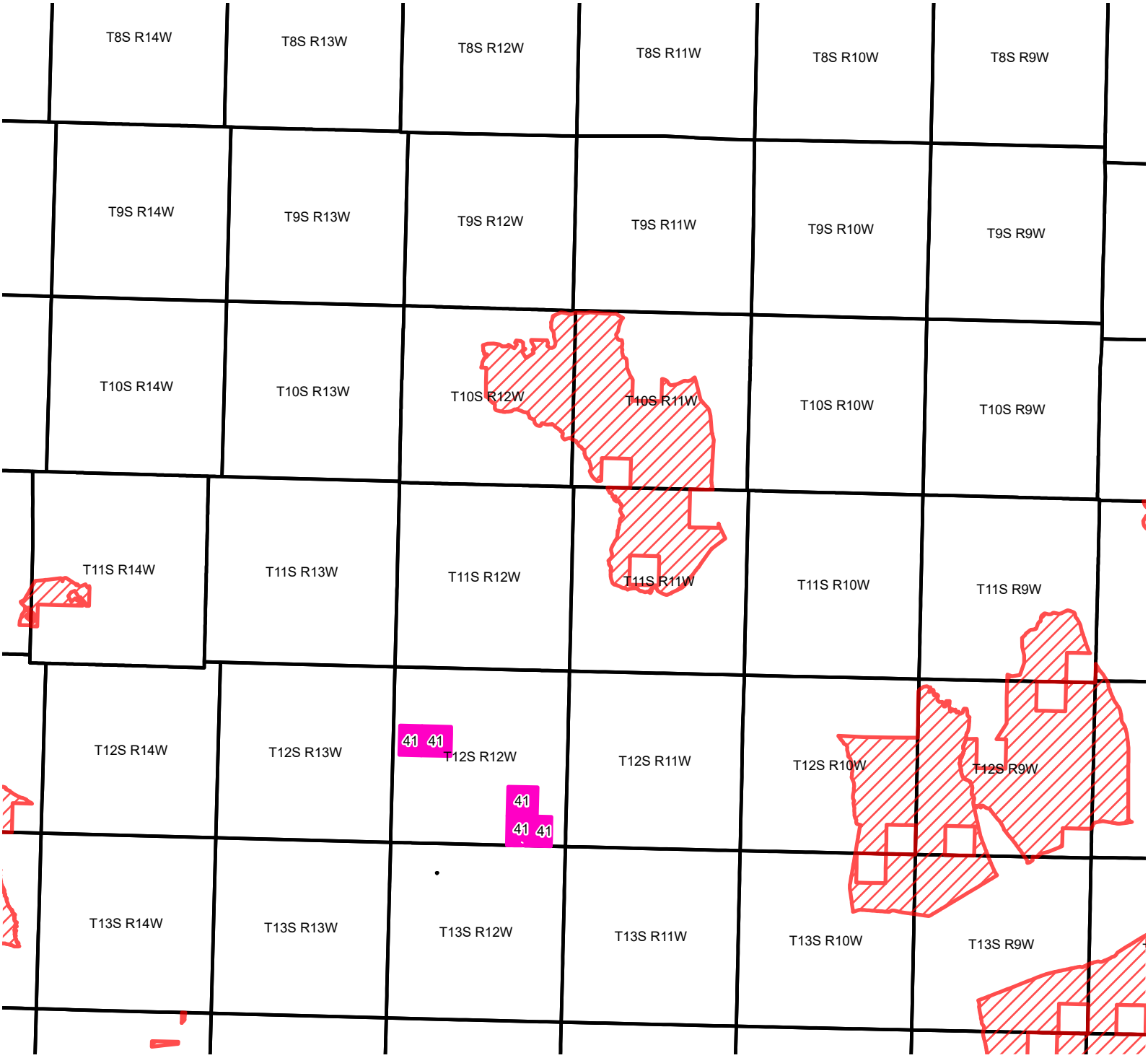
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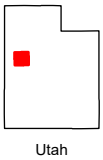
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July 3, 2023

Special Designation Map



Parcel on Current Page
41



Special Designations
- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition
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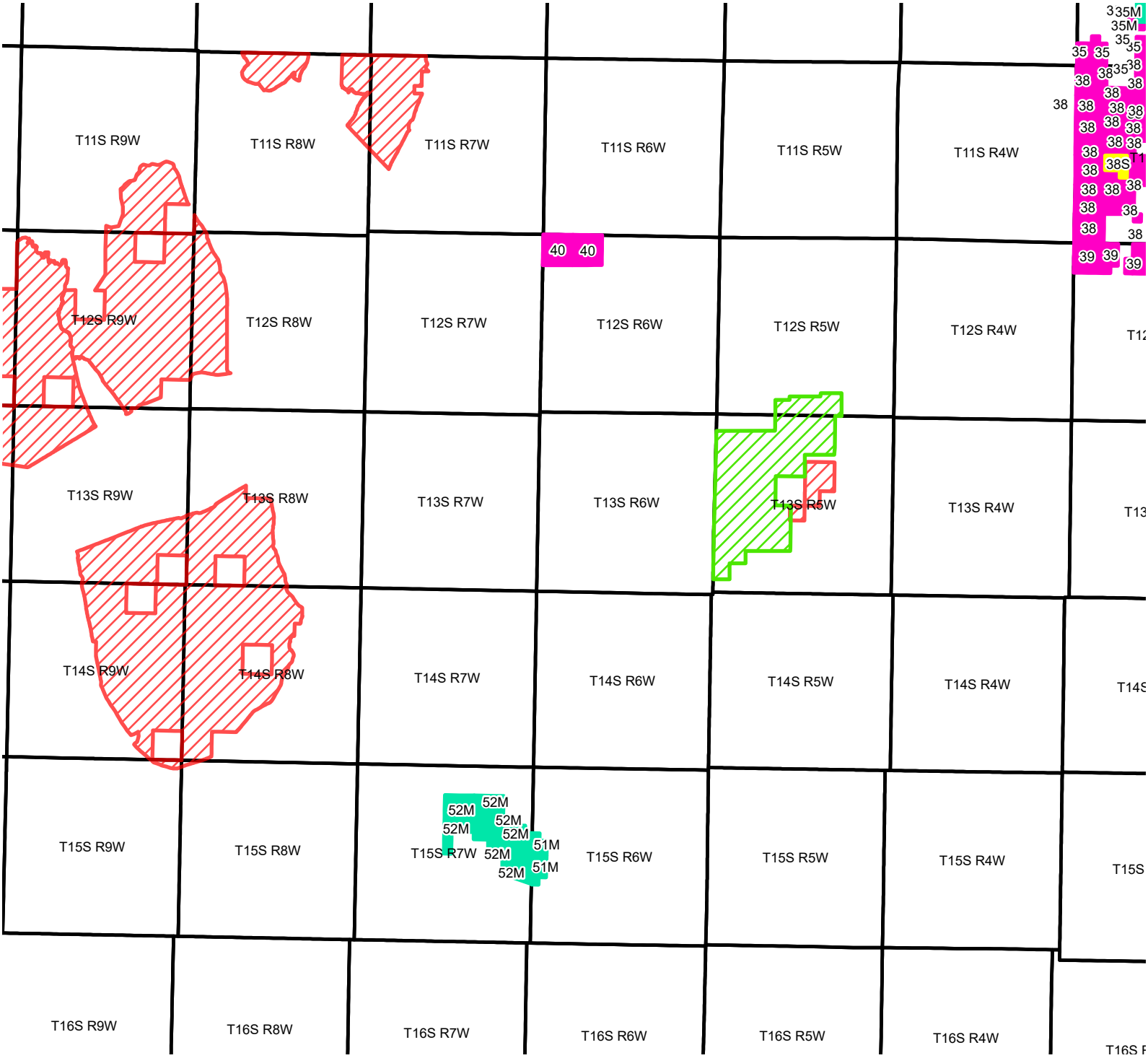
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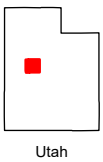
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July 3, 2023

Special Designation Map



Parcel on Current Page	38	40
35	38S	51M
35M	39	52M



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
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BLM and SITLA Parcel Disposition

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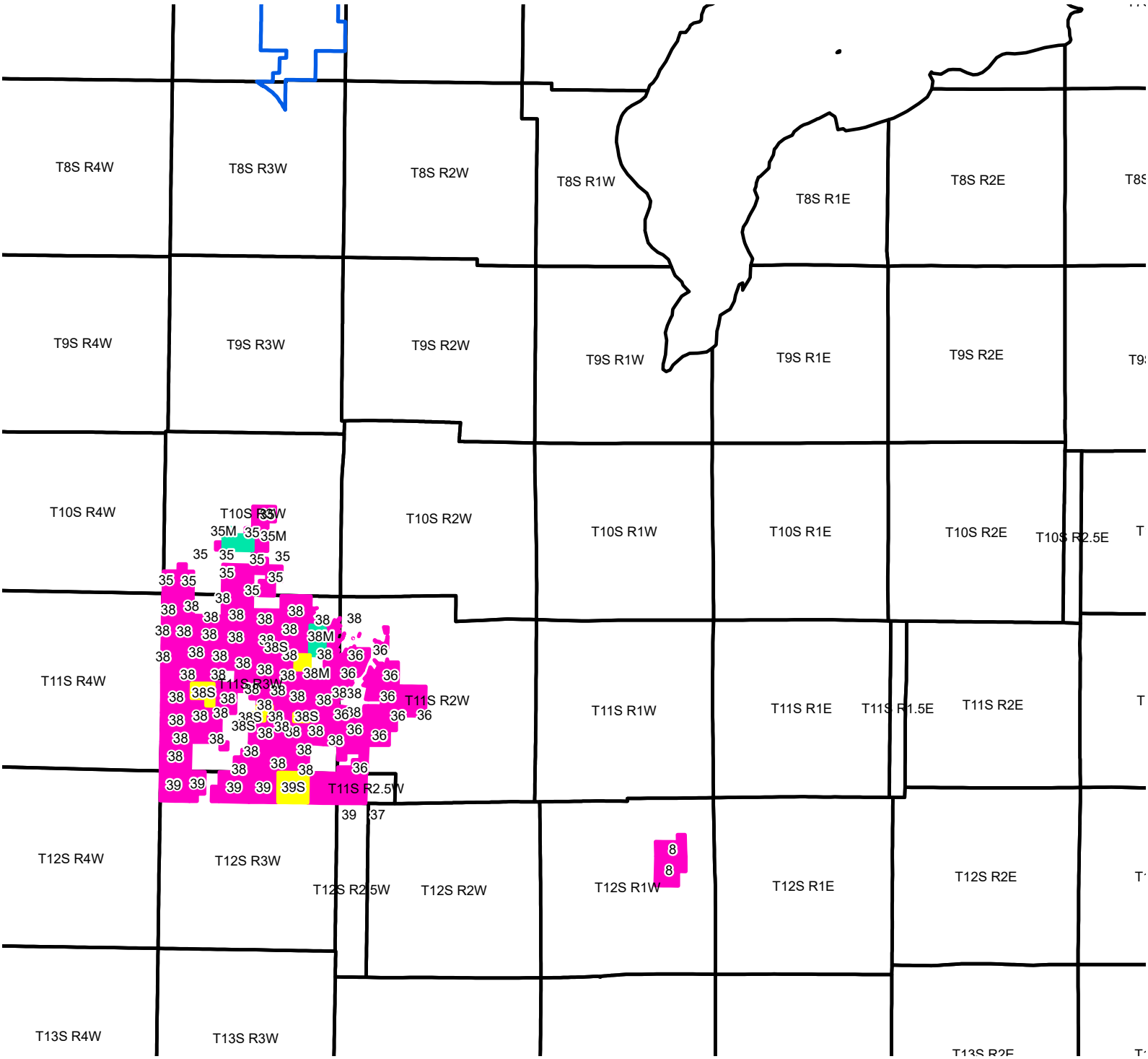
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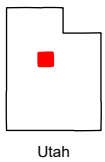
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July 3, 2023

Special Designation Map



Parcel on Current Page			
35	36	38M	39S
35M	37	38S	8
	38	39	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
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BLM and SITLA Parcel Disposition

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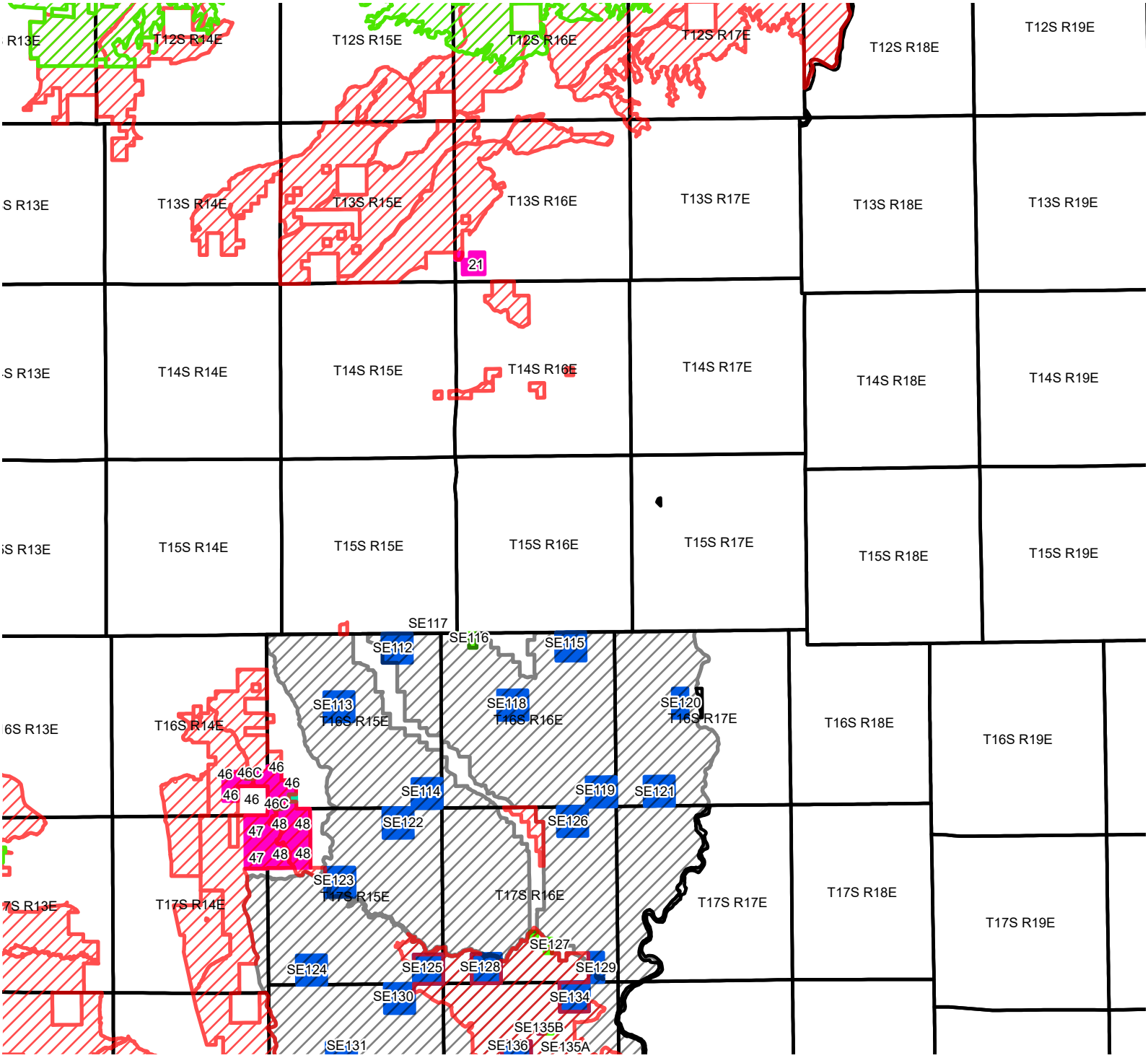
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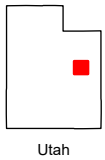
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July 3, 2023

Special Designation Map



Parcel on Current Page					
21	SE112	SE117	SE122	SE127	SE134
46	SE113	SE118	SE123	SE128	SE135A
46C	SE114	SE119	SE124	SE129	SE135B
47	SE115	SE120	SE125	SE130	SE136
48	SE116	SE121	SE126	SE131	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
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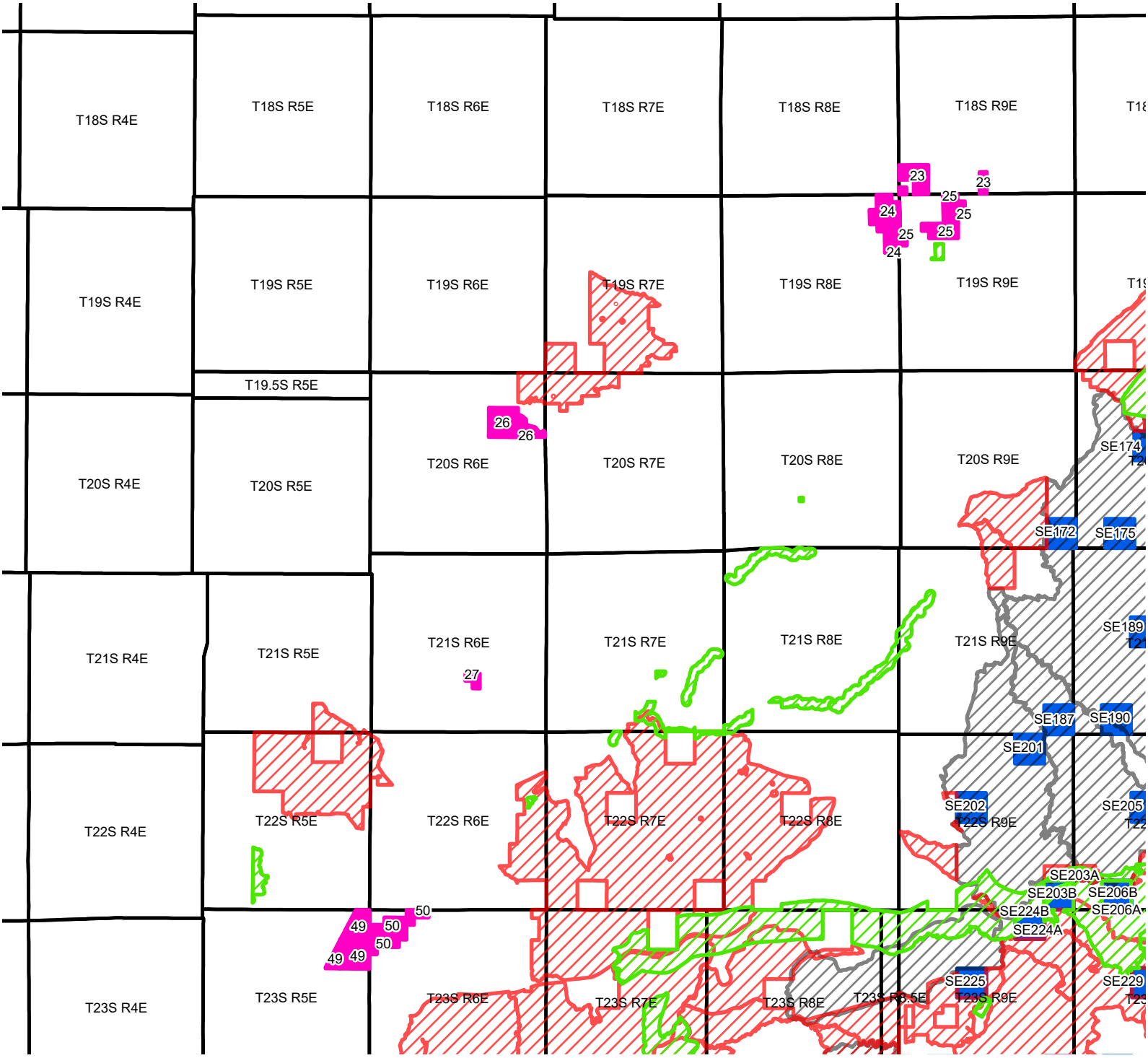
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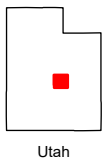
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July 3, 2023

Special Designation Map



Parcel on Current Page				
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24	50	SE189	SE203B	SE224B
25	SE172	SE190	SE205	SE225
26	SE174	SE201	SE206A	SE229
27	SE175	SE202	SE206B	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
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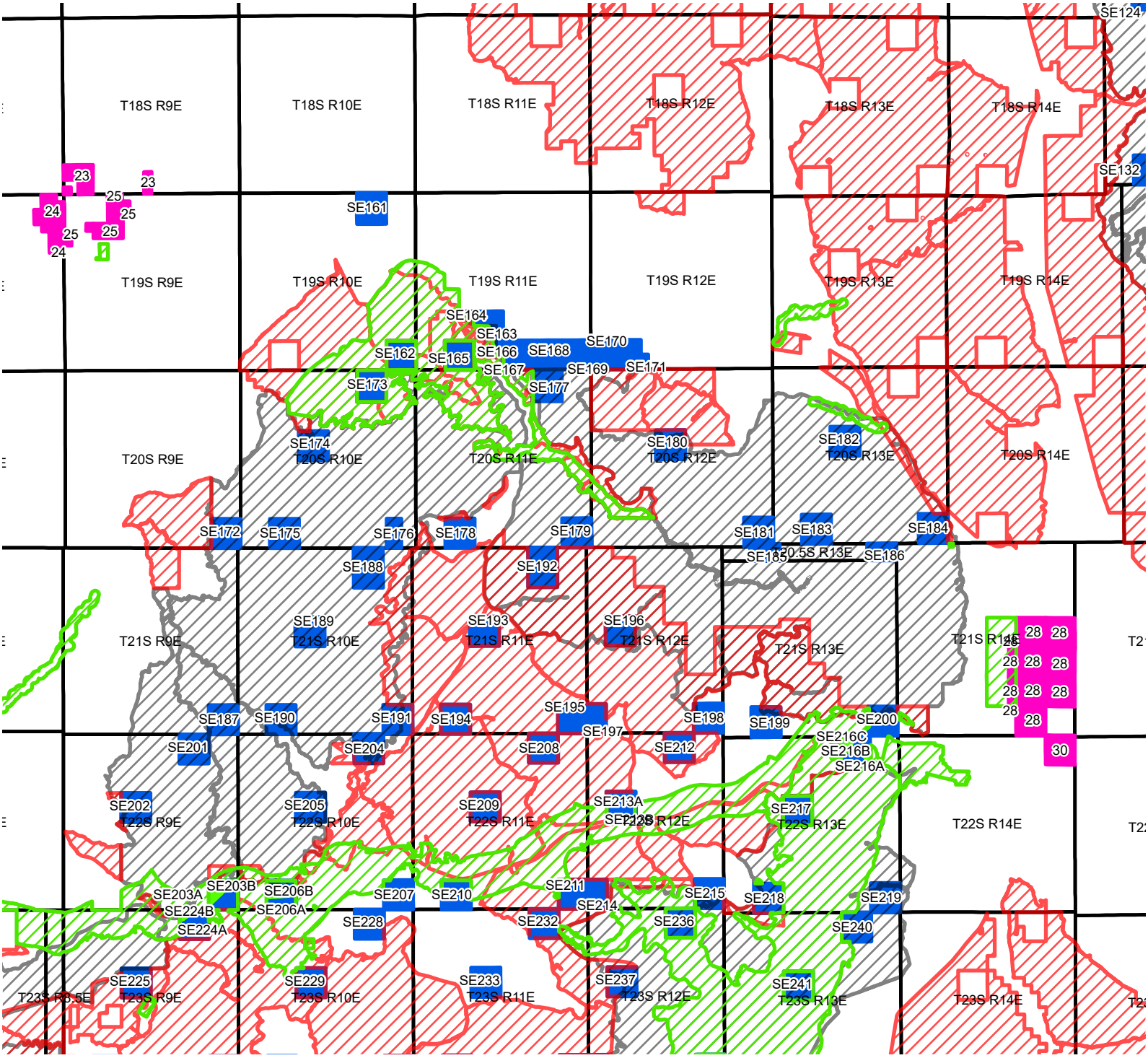
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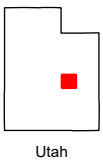
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July 3, 2023

Special Designation Map



Parcel on Current Page											
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24	SE161	SE168	SE175	SE182	SE189	SE196	SE203A	SE208	SE214	SE219	SE233
25	SE162	SE169	SE176	SE183	SE190	SE197	SE203B	SE209	SE215	SE224A	SE236
28	SE163	SE170	SE177	SE184	SE191	SE198	SE204	SE210	SE216A	SE224B	SE237
30	SE164	SE171	SE178	SE185	SE192	SE199	SE205	SE211	SE216B	SE225	SE240
SE124	SE165	SE172	SE179	SE186	SE193	SE200	SE206A	SE212	SE216C	SE228	SE241
	SE166	SE173	SE180	SE187	SE194	SE201	SE206B	SE213A	SE217	SE229	



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
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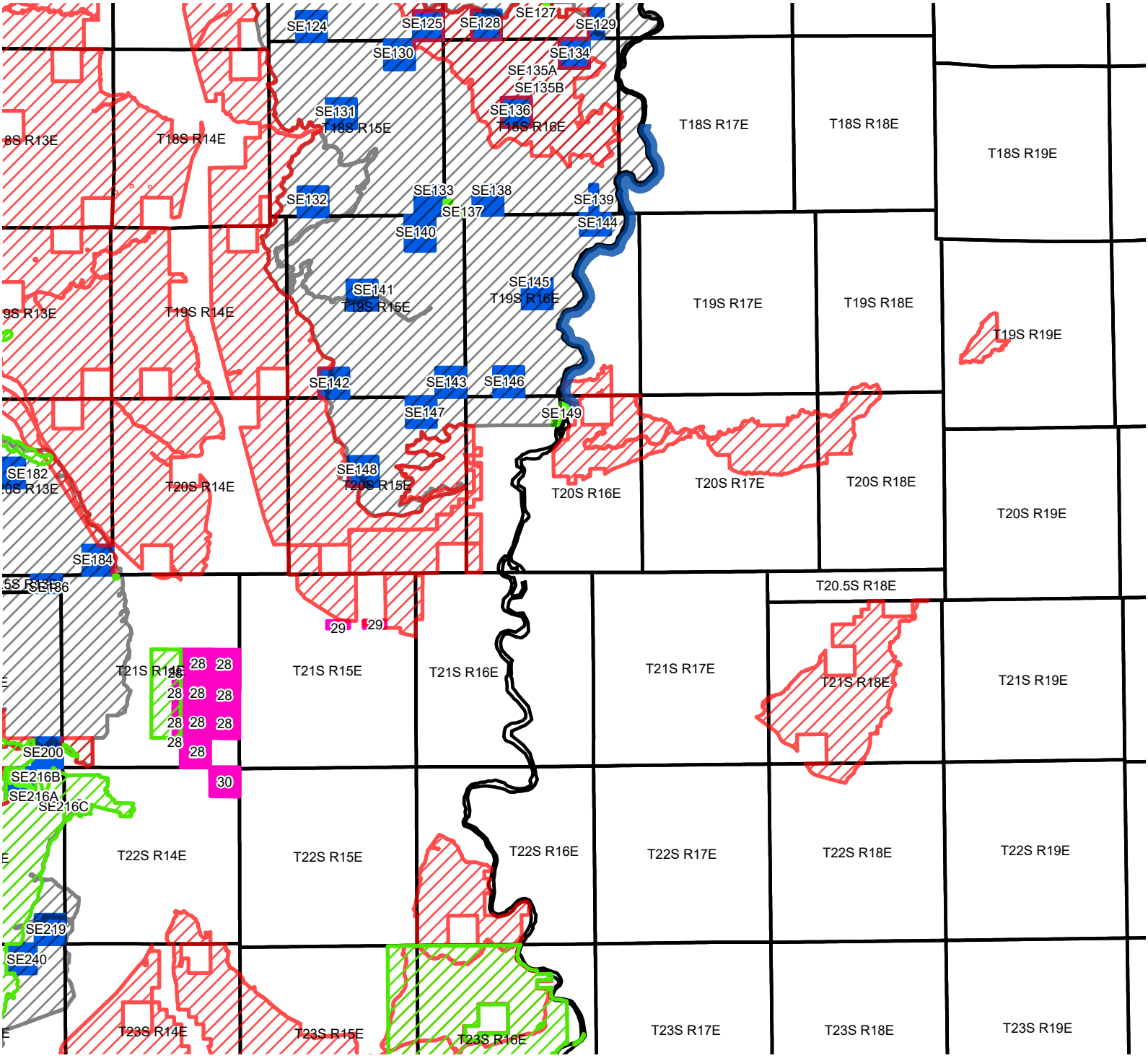
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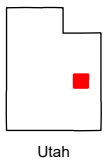
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July 3, 2023

Special Designation Map



Parcel on Current Page							
28	SE125	SE131	SE135B	SE140	SE145	SE182	SE216B
29	SE127	SE132	SE136	SE141	SE146	SE184	SE216C
30	SE128	SE133	SE137	SE142	SE147	SE186	SE219
SE124	SE129	SE134	SE138	SE143	SE148	SE200	SE240
	SE130	SE135A	SE139	SE144	SE149	SE216A	



Special Designations

- National Monument and National Conservation Area
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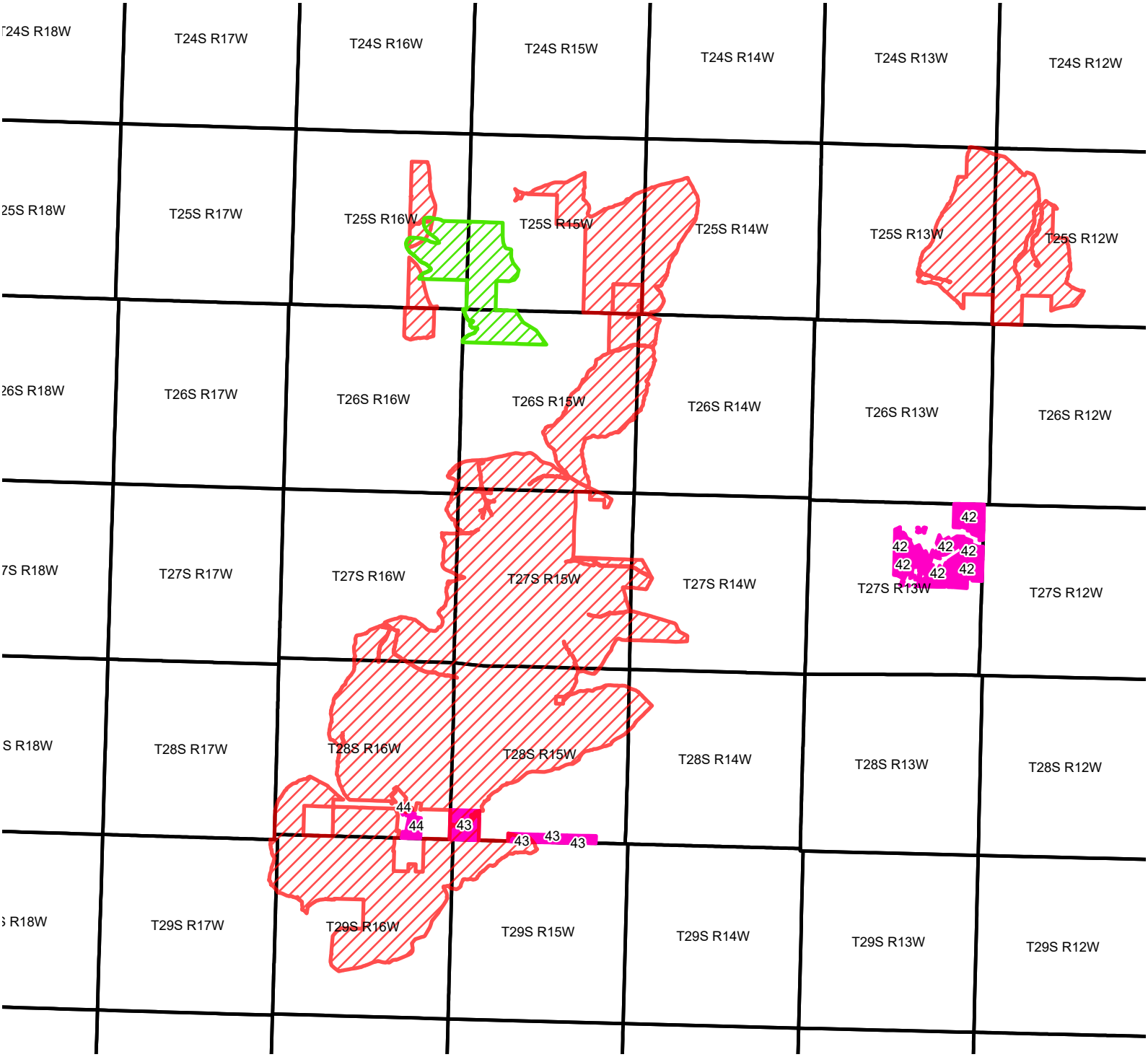
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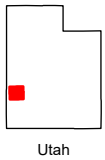
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July 3, 2023

Special Designation Map



Parcel on Current Page
42
43
44



Special Designations
- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition
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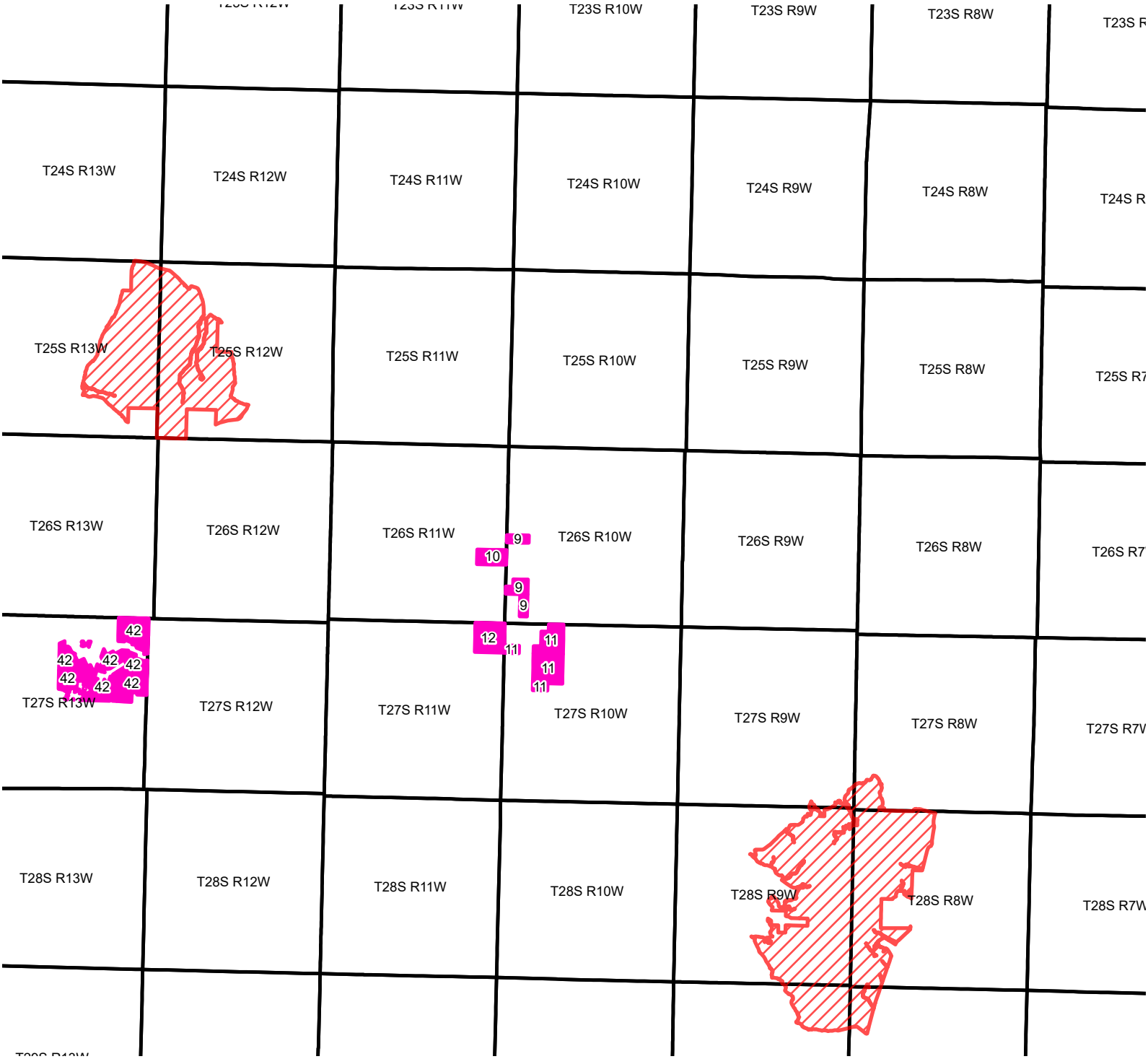
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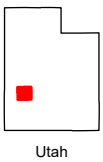
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July 3, 2023

Special Designation Map



Parcel on Current Page		
	11	42
10	12	9



Special Designations

- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
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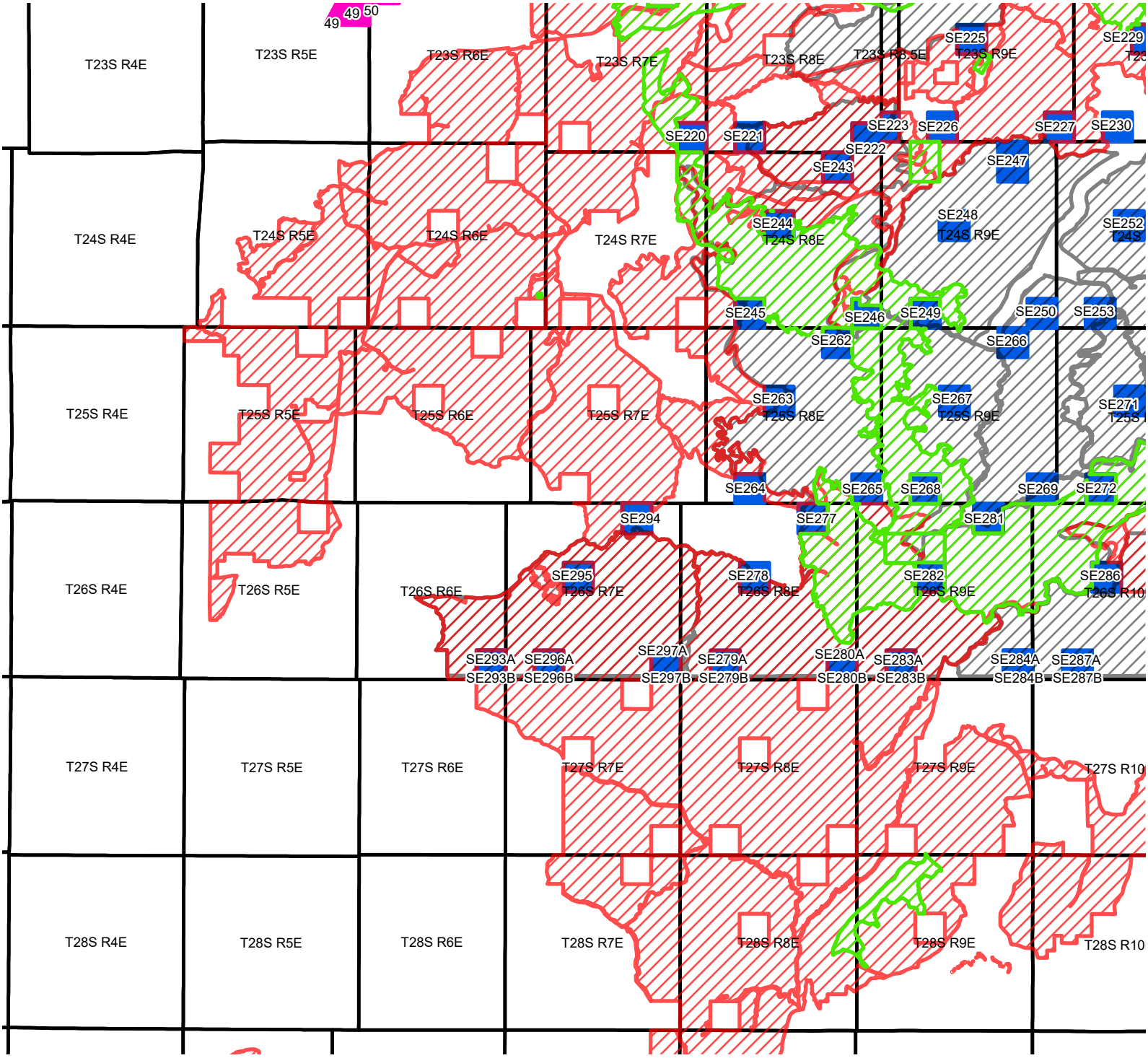
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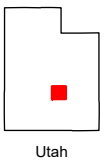
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July 3, 2023

Special Designation Map



Parcel on Current Page							
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50	SE226	SE246	SE262	SE269	SE280A	SE284B	SE295
SE220	SE227	SE247	SE263	SE271	SE280B	SE286	SE296A
SE221	SE229	SE248	SE264	SE272	SE281	SE287A	SE296B
SE222	SE230	SE249	SE265	SE277	SE282	SE287B	SE297A
SE223	SE243	SE250	SE266	SE278	SE283A	SE293A	SE297B
	SE244	SE252	SE267	SE279A	SE283B	SE293B	



Special Designations

- National Monument and National Conservation Area
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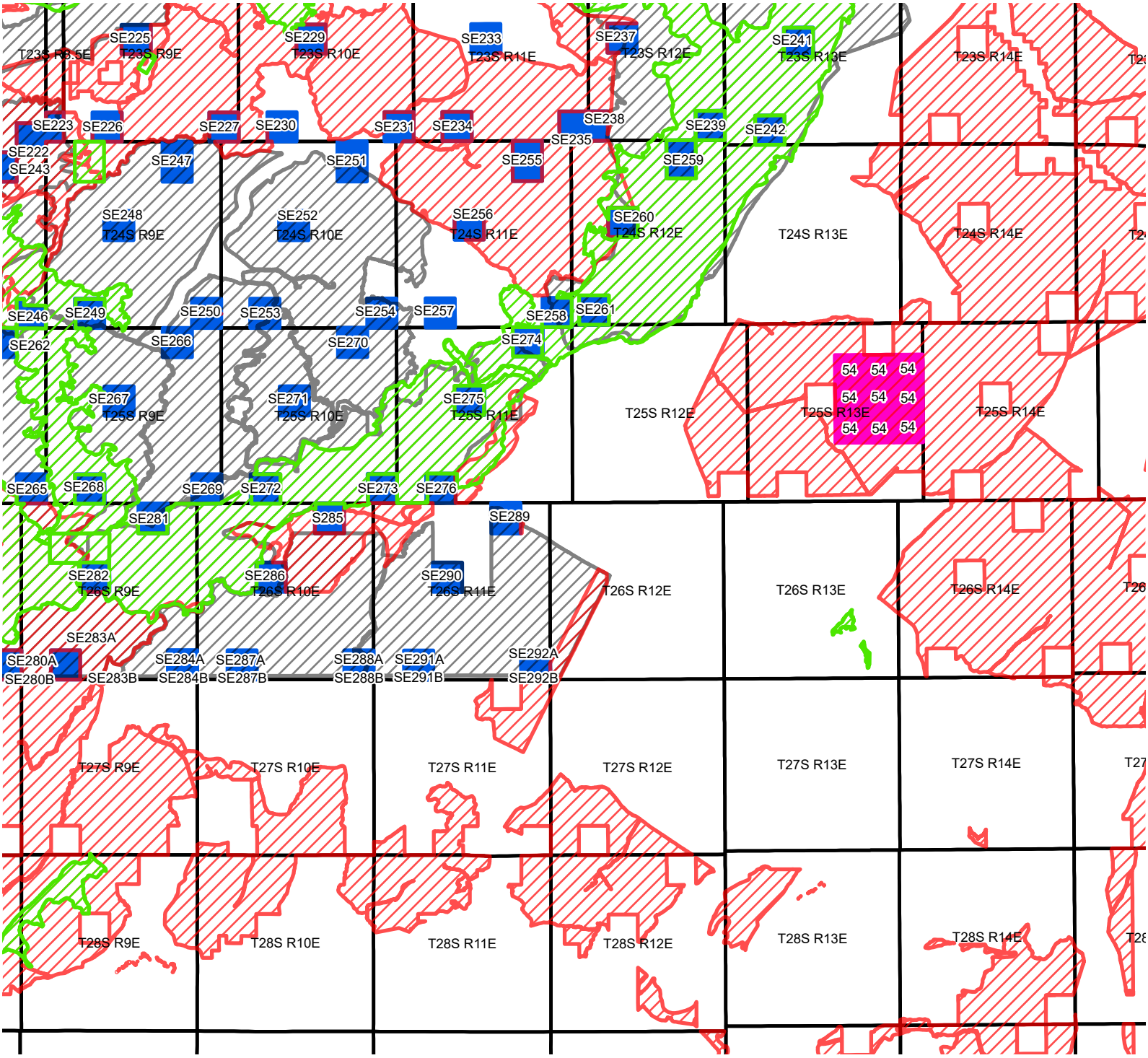
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July 3, 2023

Special Designation Map



Parcel on Current Page	SE227	SE237	SE247	SE254	SE261	SE270	SE280A	SE284B	SE290
54	SE229	SE238	SE248	SE255	SE262	SE271	SE280B	SE286	SE291A
S285	SE230	SE239	SE249	SE256	SE265	SE272	SE281	SE287A	SE291B
SE222	SE231	SE241	SE250	SE257	SE266	SE273	SE282	SE287B	SE292A
SE223	SE233	SE242	SE251	SE258	SE267	SE274	SE283A	SE288A	SE292B
SE225	SE234	SE243	SE252	SE259	SE268	SE275	SE283B	SE288B	
SE226	SE235	SE246	SE253	SE260	SE269	SE276	SE284A	SE289	

Utah

Special Designations

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- Wild and Scenic Rivers
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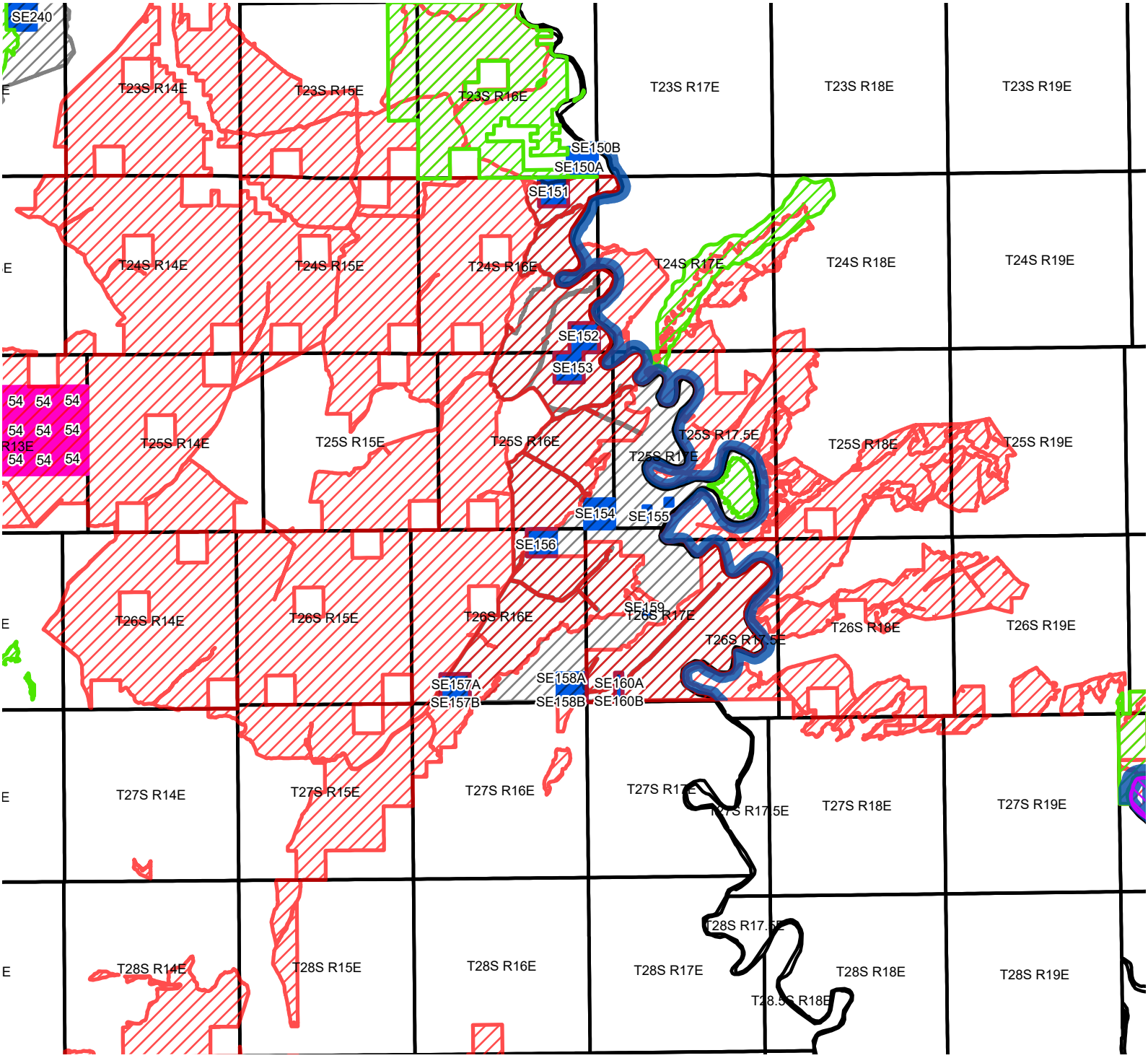
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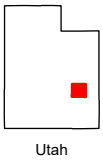
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July 3, 2023

Special Designation Map



Parcel on Current Page				
54	SE151	SE155	SE158A	SE160B
SE150A	SE152	SE156	SE158B	SE240
SE150B	SE153	SE157A	SE159	
	SE154	SE157B	SE160A	



Special Designations

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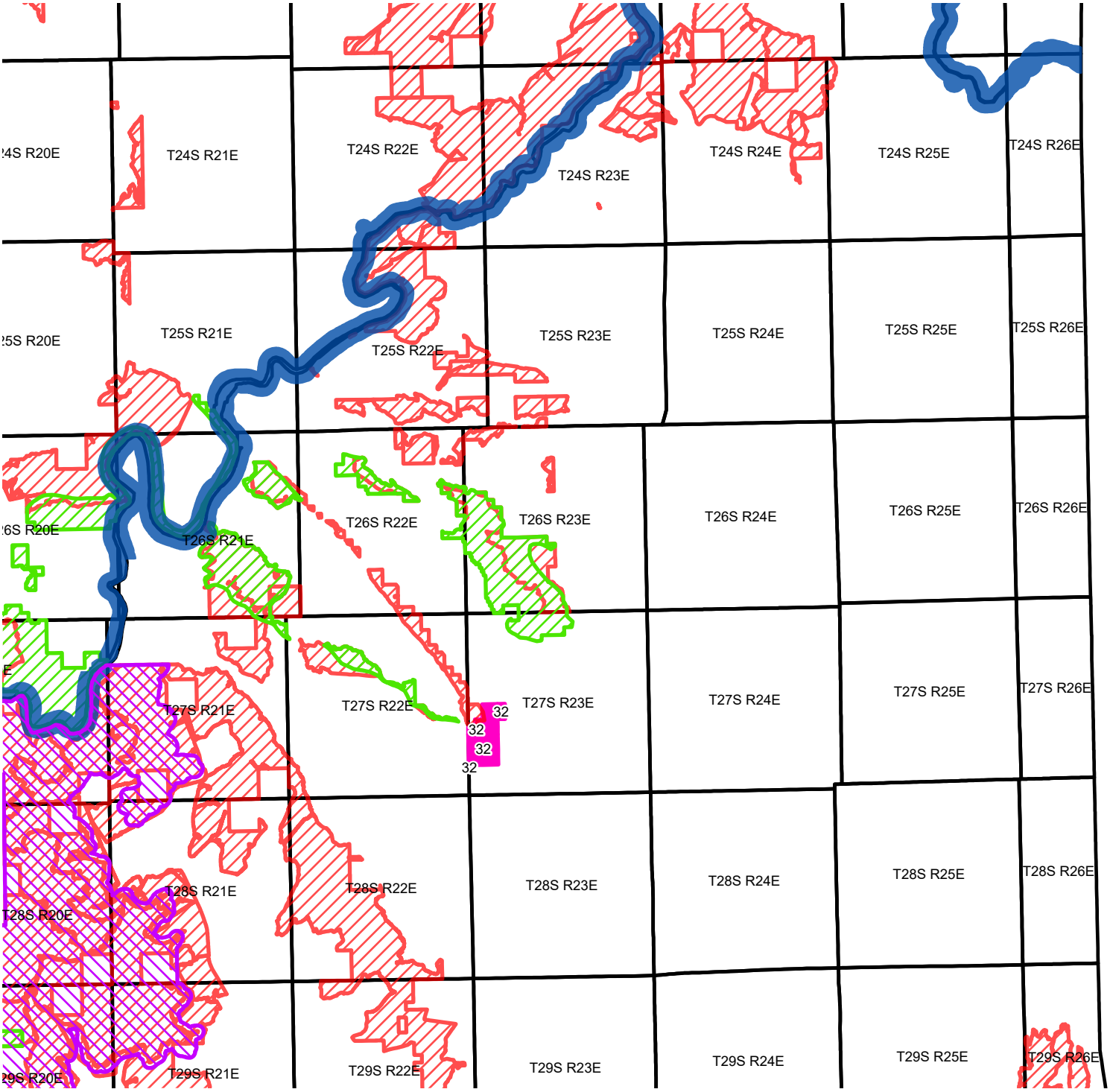
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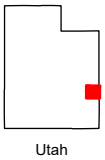
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Special Designation Map



Parcel on Current Page
32



Special Designations
- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
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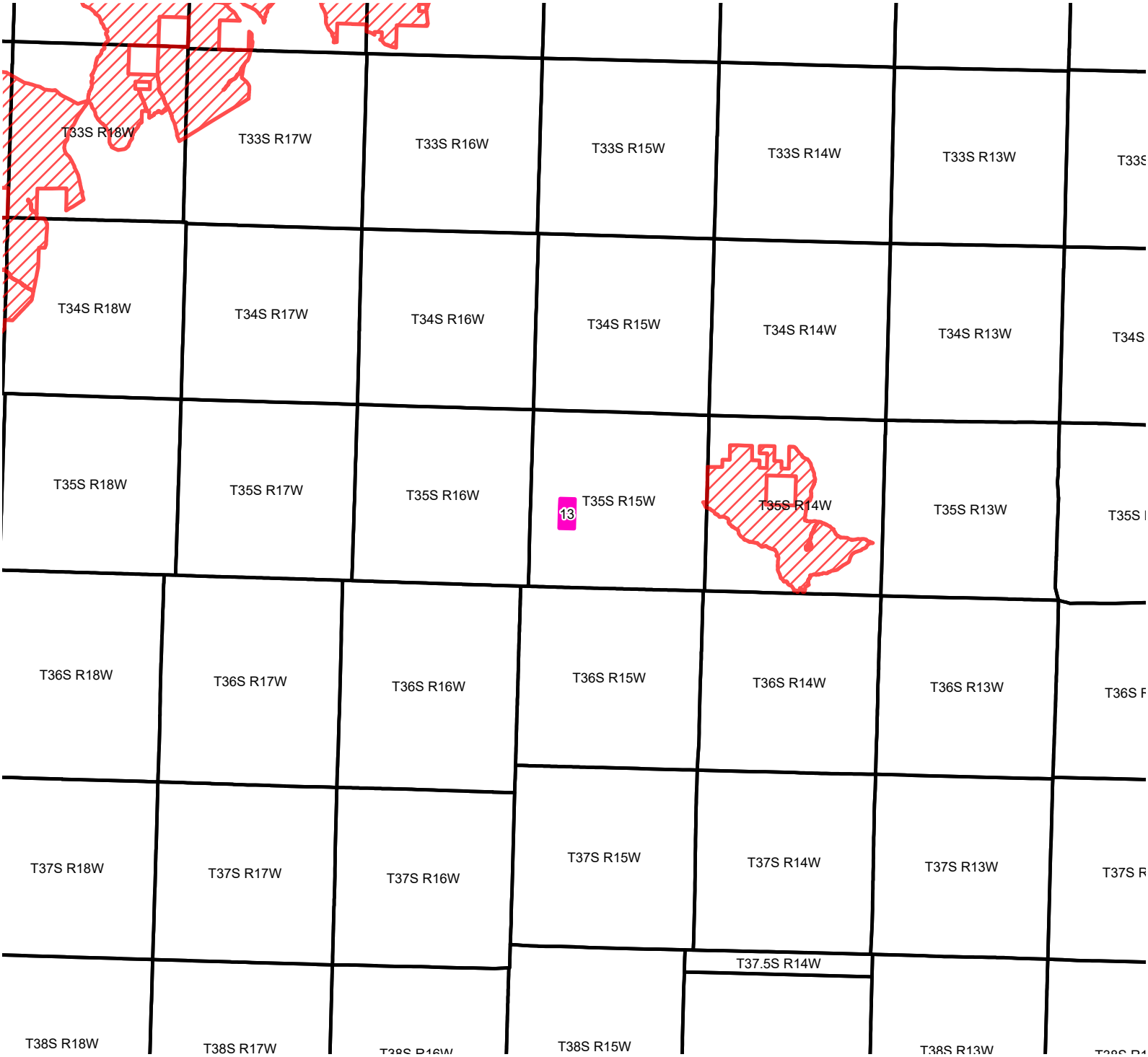
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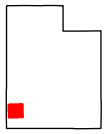
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

July 3, 2023

Special Designation Map



Parcel on Current Page
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Special Designations
- National Monument and National Conservation Area
- Wild and Scenic Rivers
- Areas of Critical Environmental Concern
- Lands with Wilderness Characteristics
- Special Area Boundary
- Wilderness Areas

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

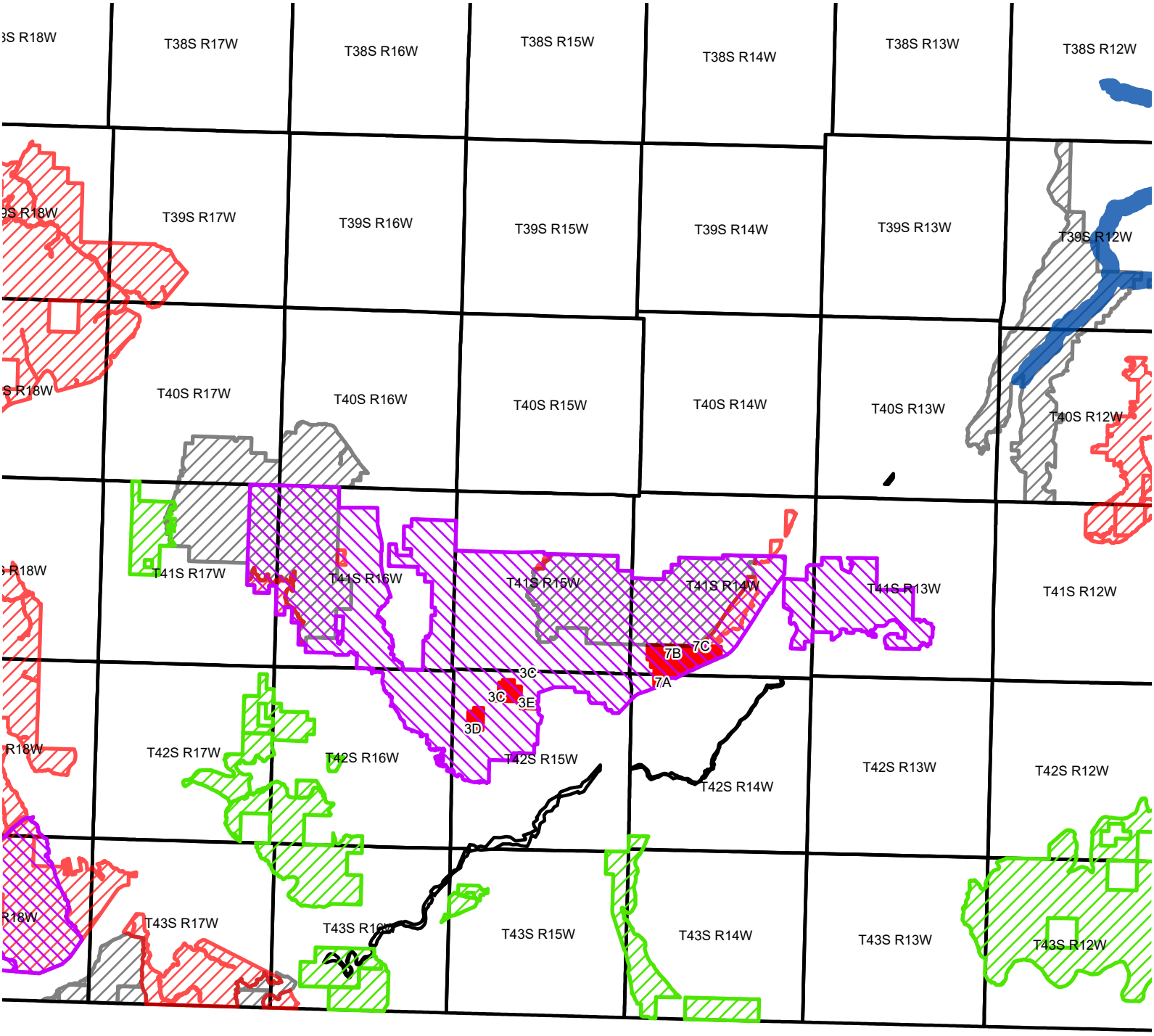
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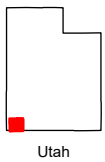
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July 3, 2023

Special Designation Map



Parcel on Current Page		
3C	3E	7C
3D	7A	
	7B	



Special Designations

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- Equalization parcel

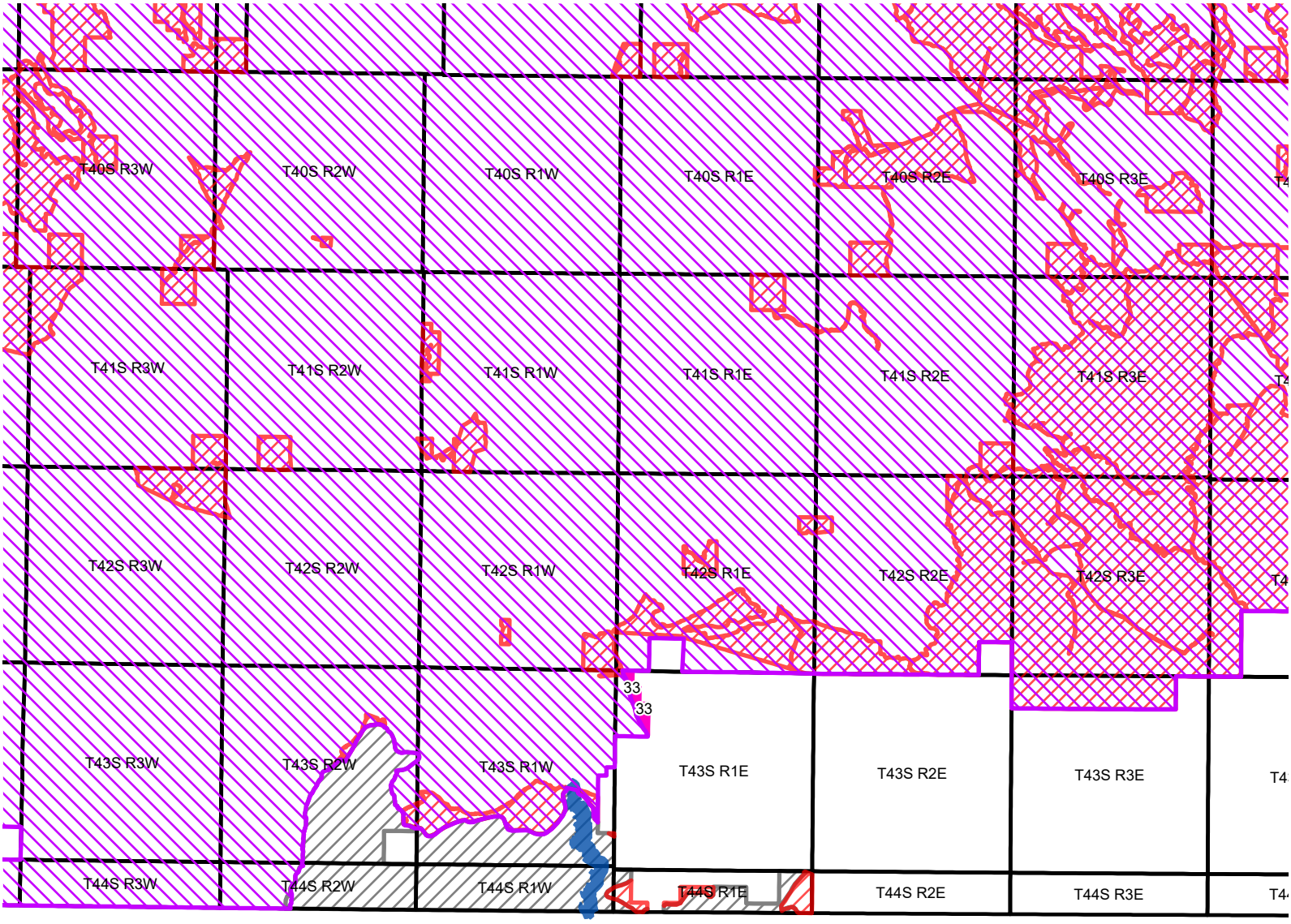
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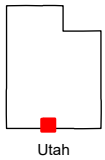
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July 3, 2023

Special Designation Map



Parcel on Current Page
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Special Designations
- National Monument and National Conservation Area
- Wild and Scenic Rivers
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BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

N

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July 3, 2023

Appendix D Vegetation Communities List for BLM, SITLA, and Equalization Parcels

September 2023

Table D-1. Vegetation Types Present on BLM Parcels

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Inter-Mountain Basins Big Sagebrush Shrubland	26,588	1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 20, 21, 23, 24, 25, 26, 27, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 53, 2S, 38S, 39S, 3S, 5S
Great Basin Pinyon-Juniper Woodland	11,426	6, 8, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 38S, 39S
Inter-Mountain Basins Mat Saltbush Shrubland	6,280	1, 2, 3, 4, 5, 23, 24, 25, 26, 27, 28, 29, 30, 32, 47, 49, 50, 53, 54, 2S, 3S, 5S
Colorado Plateau Pinyon-Juniper Woodland	4,556	1, 2, 3, 4, 5, 6, 15, 17, 20, 21, 23, 24, 26, 32, 35, 36, 37, 38, 39, 42, 43, 46, 47, 48, 53, 38S, 3S, 5S
Colorado Plateau Blackbrush-Mormon-tea Shrubland	4,555	24, 28, 30, 32, 33, 54
Inter-Mountain Basins Montane Sagebrush Steppe	4,149	1, 2, 3, 4, 5, 6, 15, 17, 20, 21, 26, 34, 35, 36, 37, 38, 39, 42, 43, 44, 46, 48, 2S, 3S, 5S
Inter-Mountain Basins Big Sagebrush Steppe	3,771	1, 2, 3, 4, 5, 6, 35, 36, 37, 38, 40, 2S, 3S, 5S
Inter-Mountain Basins Mixed Salt Desert Scrub	3,519	1, 2, 4, 5, 8, 9, 10, 11, 12, 13, 21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 46, 47, 48, 49, 50, 53, 54, 2S, 5S
Wyoming Basins Dwarf Sagebrush Shrubland and Steppe	3,257	1, 2, 3, 4, 5, 2S, 3S, 5S
Inter-Mountain Basins Semi-Desert Shrub-Steppe	2,991	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 20, 23, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 50, 53, 54, 2S, 38S, 39S, 3S, 5S
Great Basin & Intermountain Ruderal Shrubland	2,380	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 20, 23, 24, 26, 28, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 53, 54, 2S, 38S, 39S, 3S, 5S
Great Basin Xeric Mixed Sagebrush Shrubland	1,946	6, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 38S, 39S
Inter-Mountain Basins Shale Badland	1,467	1, 2, 3, 5, 23, 24, 25, 26, 27, 28, 29, 30, 33, 46, 47, 48, 49, 50, 53, 54, 2S, 5S
Rocky Mountain Foothill Limber Pine-Juniper Woodland	1,102	1, 2, 3, 5, 17, 20, 2S, 3S, 5S
Colorado Plateau Mixed Bedrock Canyon and Tableland	971	21, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 46, 47, 48, 49, 50, 53, 54
Colorado Plateau Mixed Low Sagebrush Shrubland	491	21, 23, 24, 25, 26, 27, 46, 47, 48, 49, 50, 53
Southern Colorado Plateau Sand Shrubland	689	23, 25, 32, 33, 54
Colorado Plateau Pinyon-Juniper Shrubland	446	23, 24, 25, 26, 28, 32, 47, 48, 50

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Great Basin & Intermountain Introduced Annual and Biennial Forbland	375	3, 8, 9, 10, 11, 12, 13, 25, 28, 30, 32, 33, 35, 36, 38, 39, 40, 41, 42, 49, 53, 39S
Inter-Mountain Basins Active and Stabilized Dune	358	54
Western Cool Temperate Urban Shrubland	315	5, 8, 9, 11, 12, 15, 23, 24, 26, 28, 32, 33, 35, 38, 46, 49, 50, 53, 38S, 39S, 5S
Inter-Mountain Basins Greasewood Flat	277	1, 2, 4, 5, 9, 10, 11, 12, 13, 23, 24, 25, 26, 28, 32, 33, 35, 38, 39, 40, 41, 47, 49, 50, 53, 54, 5S
Rocky Mountain Gambel Oak-Mixed Montane Shrubland	218	6, 15, 17, 20, 23, 24, 32, 34, 36, 37, 38, 39, 42, 44, 46, 47, 48, 38S
Great Basin & Intermountain Introduced Perennial Grassland and Forbland	217	1, 2, 3, 4, 5, 8, 15, 20, 21, 24, 35, 36, 38, 39, 40, 41, 42, 49, 53, 2S, 38S, 39S, 3S, 5S
Rocky Mountain Lower Montane-Foothill Riparian Shrubland	162	1, 2, 4, 5, 17, 23, 53, 5S
Inter-Mountain Basins Curl-leaf Mountain Mahogany Woodland	150	1, 2, 3, 17, 20, 23, 34, 36, 37, 43, 44, 3S
Great Basin & Intermountain Introduced Annual Grassland	140	3, 5, 6, 8, 9, 10, 12, 20, 25, 28, 30, 32, 33, 35, 36, 38, 39, 40, 41, 42, 47, 53, 38S, 39S
Western Cool Temperate Pasture and Hayland	143	2, 4, 11, 23, 24, 25, 26, 27, 28, 35, 38, 39, 49, 53, 38S, 5S
Rocky Mountain Bigtooth Maple Ravine Woodland	134	15, 17, 20, 34, 36
Rocky Mountain Lower Montane-Foothill Shrubland	109	17, 20, 21, 26, 32, 34, 36, 37, 38, 40, 46, 47, 48, 38S, 3S
Southern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest and Woodland	119	15, 17, 20, 21, 26, 34, 36, 42, 43, 44, 46, 47, 48
Inter-Mountain Basins Cliff and Canyon	105	1, 2, 3, 5, 38, 40, 41, 42, 2S, 5S
Rocky Mountain Aspen Forest and Woodland	99	1, 2, 3, 5, 15, 17, 20, 23, 34, 36
Great Basin Semi-Desert Chaparral	61	6, 34, 35, 36, 38, 40, 41, 42, 43, 44, 38S
Inter-Mountain Basins Semi-Desert Grassland	50	1, 2, 3, 5, 6, 8, 10, 12, 13, 21, 23, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 47, 48, 53, 38S, 39S, 5S
Western North American Ruderal Wet Meadow & Marsh	55	1, 4, 5, 24, 5S
North American Arid West Emergent Marsh	54	2, 4, 5, 11, 12, 24, 25, 32, 38, 5S
Mojave Mid-Elevation Mixed Desert Scrub	50	9, 11, 40, 41, 42

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Rocky Mountain Lower Montane-Foothill Riparian Woodland	45	1, 2, 4, 5, 17, 23, 24, 25, 32, 34, 5S
Western Cool Temperate Urban Herbaceous	34	8, 11, 12, 15, 24, 26, 28, 32, 33, 35, 38, 42, 49, 53, 38S, 39S
Inter-Mountain Basins Playa	34	5, 9, 11, 12, 5S
Interior Western North American Temperate Ruderal Shrubland	31	2, 11, 12, 20, 41, 53
Rocky Mountain Cliff Canyon and Massive Bedrock	28	21, 23, 25, 26, 42, 46, 47, 48, 53, 5S
Inter-Mountain Basins Wash	27	8, 11, 12, 38, 39, 40, 41
Great Basin Foothill and Lower Montane Riparian Shrubland	25	35, 38, 38S
Western Cool Temperate Fallow/Idle Cropland	24	6, 8, 11, 36, 38, 39, 40, 49, 50, 53, 38S, 5S
Western Cool Temperate Close Grown Crop	19	4, 8, 23, 24, 25, 26, 27, 35, 36, 38, 39, 53, 38S, 5S
Interior West Ruderal Riparian Scrub	18	4, 9, 11, 12, 23, 24, 25, 32, 5S
Southern Rocky Mountain Montane-Subalpine Grassland	13	17, 20, 21, 26, 36, 42
Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland	12	17, 20, 36, 42, 43, 44
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	9	17, 20, 43, 44
Southern Rocky Mountain Ponderosa Pine Woodland	8	21, 42, 43, 44
Inter-Mountain Basins Aspen-Mixed Conifer Forest and Woodland	8	17, 20, 44
Inter-Mountain Basins Juniper Savanna	8	34, 36
Western Cool Temperate Urban Evergreen Forest	7	32, 38, 46, 38S
Interior Western North American Temperate Ruderal Grassland	6	15, 17, 20, 36, 38
Rocky Mountain Subalpine-Montane Mesic Meadow	4	2, 17, 20, 21, 36, 42
Great Basin Foothill and Lower Montane Riparian Woodland	2	36, 43, 44, 38S
Inter-Mountain Basins Alkaline Closed Depression	2	9, 11, 12, 38
Great Basin Foothill and Lower Montane Riparian Herbaceous	1	11, 38
Western Cool Temperate Orchard	1	38

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Interior West Ruderal Riparian Forest	1	23, 25
Rocky Mountain Subalpine-Montane Riparian Shrubland	1	44
Western Cool Temperate Developed Evergreen Forest	1	38, 46
Western Cool Temperate Row Crop	<1	38, 53
Western Cool Temperate Urban Deciduous Forest	<1	15
Inter-Mountain Basins Subalpine Limber-Bristlecone Pine Woodland	<1	43
Rocky Mountain Alpine-Montane Wet Meadow	<1	5
Western Cool Temperate Row Crop - Close Grown Crop	<1	5S
Western Cool Temperate Wheat	<1	11
Rocky Mountain Subalpine Mesic-Wet Spruce-Fir Forest and Woodland	<1	17
Grand Total	**86,355**	

* Excludes parcels only conveying subsurface mineral rights or mapped as developed, open water, or quarries.

Table D-2. Vegetation Types Present on SITLA Parcels

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Colorado Plateau Mixed Bedrock Canyon and Tableland	23,270	S285, SE103, SE104, SE105, SE108, SE109, SE111, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE155, SE156, SE157A, SE158A, SE158B, SE159, SE160A, SE160B, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A,

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
		SE291B, SE293A, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Inter-Mountain Basins Mixed Salt Desert Scrub	11,867	S285, SE102, SE103, SE104, SE105, SE106, SE107, SE108, SE109, SE110, SE111, SE112, SE114, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE156, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288A, SE289, SE290, SE291A, SE292A, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Colorado Plateau Pinyon-Juniper Woodland	11,603	SE102, SE103, SE104, SE105, SE106, SE108, SE109, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE153, SE154, SE156, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE174, SE175, SE176, SE177, SE180, SE181, SE182, SE183, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE194, SE195, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE211, SE212, SE213A, SE214, SE215, SE217, SE218, SE220, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE234, SE236, SE237, SE239, SE241, SE243, SE247, SE248, SE255, SE256, SE258, SE259, SE260, SE262, SE265, SE268, SE269, SE274, SE275, SE282, SE287A
Inter-Mountain Basins Shale Badland	11,199	S285, SE103, SE107, SE111, SE120, SE121, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE155, SE156, SE159, SE161, SE162, SE163, SE165, SE167, SE168, SE169, SE170, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190,

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
		SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Colorado Plateau Pinyon-Juniper Shrubland	9,972	S285, SE104, SE106, SE108, SE109, SE120, SE121, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE152, SE153, SE154, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE208, SE209, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE220, SE221, SE227, SE232, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE284A, SE286, SE287A, SE289, SE290, SE291A, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A
Inter-Mountain Basins Big Sagebrush Shrubland	9,895	SE102, SE103, SE104, SE105, SE106, SE107, SE108, SE109, SE110, SE111, SE112, SE114, SE119, SE120, SE121, SE122, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE153, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE217, SE218, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262,

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
		SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE274, SE277, SE278, SE282, SE293A, SE294, SE297A
Inter-Mountain Basins Semi-Desert Shrub-Steppe	9,071	S285, SE102, SE103, SE104, SE105, SE106, SE107, SE108, SE109, SE110, SE111, SE112, SE114, SE119, SE120, SE121, SE122, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE156, SE157A, SE157B, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Colorado Plateau Mixed Low Sagebrush Shrubland	8,828	S285, SE102, SE103, SE104, SE106, SE107, SE108, SE109, SE110, SE111, SE113, SE114, SE119, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE152, SE153, SE154, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE213A, SE214, SE215, SE216A, SE217, SE218, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE233, SE234, SE235, SE236, SE237, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE251, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE277, SE278, SE279A, SE279B, SE280A, SE281, SE282, SE283A, SE284A, SE286, SE290, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Colorado Plateau Blackbrush-Mormon-tea Shrubland	5,777	S285, SE120, SE121, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE138, SE139, SE140, SE143, SE144, SE145, SE146, SE150A, SE151, SE152, SE153, SE154, SE155, SE156, SE157A, SE157B, SE158A, SE158B, SE159, SE160A, SE160B, SE168, SE169, SE174, SE175, SE177, SE179, SE181, SE182, SE183, SE184, SE185, SE186, SE192, SE200, SE216A, SE219, SE220, SE239, SE240, SE241, SE242, SE245, SE246, SE249, SE258, SE259, SE260, SE261, SE262, SE265, SE268, SE269, SE271, SE272, SE273, SE274, SE275, SE276, SE280A, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B
Southern Colorado Plateau Sand Shrubland	4,647	S285, SE124, SE125, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE157A, SE157B, SE158A, SE160A, SE172, SE174, SE175, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE192, SE196, SE199, SE200, SE210, SE216A, SE219, SE220, SE230, SE233, SE239, SE240, SE241, SE242, SE245, SE246, SE248, SE249, SE253, SE258, SE259, SE260, SE261, SE262, SE263, SE265, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B, SE293A, SE294, SE295, SE297A, SE297B
Inter-Mountain Basins Mat Saltbush Shrubland	3,207	S285, SE106, SE111, SE121, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE161, SE162, SE163, SE164, SE166, SE167, SE168, SE169, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE179, SE180, SE181, SE182, SE183, SE184, SE185, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE208, SE209, SE212, SE215, SE216A, SE217, SE218, SE219, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE232, SE234, SE236, SE238, SE239, SE240, SE241, SE242, SE243, SE244, SE245, SE246, SE247, SE248, SE249, SE250, SE252, SE253, SE254, SE255, SE256, SE257, SE258, SE259, SE260, SE261, SE262, SE263, SE264, SE265, SE266, SE267, SE268, SE269, SE270, SE271, SE272, SE273, SE274, SE275, SE276, SE277, SE278, SE279A, SE279B, SE280A, SE280B, SE281, SE282, SE283A, SE283B, SE284A, SE284B, SE286, SE287A, SE287B, SE288A, SE288B, SE289, SE290, SE291A, SE291B, SE292A, SE292B, SE293A, SE293B, SE294, SE295, SE296A, SE296B, SE297A, SE297B
Southern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest and Woodland	959	SE103, SE104, SE105, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE126, SE165, SE169, SE174, SE177, SE203A, SE206A, SE224A, SE225

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Great Basin & Intermountain Ruderal Shrubland	950	SE102, SE103, SE104, SE105, SE106, SE107, SE108, SE109, SE110, SE111, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE147, SE148, SE150A, SE151, SE152, SE153, SE154, SE157A, SE159, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE177, SE178, SE180, SE181, SE182, SE183, SE186, SE187, SE188, SE189, SE190, SE191, SE193, SE194, SE195, SE197, SE198, SE199, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE212, SE214, SE215, SE217, SE218, SE219, SE220, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE233, SE234, SE235, SE236, SE237, SE240, SE242, SE243, SE244, SE247, SE249, SE250, SE251, SE252, SE255, SE256, SE262, SE268, SE276, SE277, SE282, SE283A, SE283B, SE284A, SE286, SE287A, SE287B, SE290, SE291A, SE291B, SE292A
Rocky Mountain Cliff Canyon and Massive Bedrock	740	SE103, SE104, SE105, SE107, SE111, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE130, SE131, SE132, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE144, SE145, SE146, SE147, SE148, SE164, SE165, SE167, SE168, SE169, SE170, SE172, SE174, SE175, SE176, SE177, SE179, SE180, SE181, SE182, SE183, SE186, SE187, SE188, SE189, SE190, SE191, SE192, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE209, SE216A, SE217, SE218, SE220, SE221, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE232, SE234, SE236, SE241, SE242, SE245, SE255, SE258, SE259, SE260, SE262, SE263, SE269, SE270, SE272, SE280B, SE282, SE294
Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland	554	SE104, SE105, SE112, SE113, SE114, SE115, SE118, SE119, SE121, SE122, SE126, SE165
Inter-Mountain Basins Active and Stabilized Dune	373	S285, SE150A, SE152, SE153, SE154, SE156, SE157A, SE158A, SE219, SE240, SE276, SE287A, SE288A, SE288B, SE289, SE291A, SE291B, SE292A, SE292B
Rocky Mountain Lower Montane-Foothill Shrubland	365	SE102, SE103, SE104, SE105, SE106, SE109, SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE139, SE140, SE141, SE142, SE143, SE145, SE146, SE147, SE153, SE154, SE163, SE165, SE167, SE168, SE169, SE170, SE171, SE174, SE175, SE176, SE177, SE180, SE182, SE183, SE186, SE187, SE188, SE189, SE190, SE191, SE198, SE200, SE201, SE202, SE203A, SE204, SE205, SE206A, SE207, SE208, SE209, SE211, SE217, SE218, SE222, SE223, SE224A, SE225, SE226, SE227, SE228, SE229, SE230, SE231, SE234, SE236, SE237, SE239, SE240, SE242, SE255, SE260, SE262, SE268, SE269, SE272, SE281, SE282

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Inter-Mountain Basins Greasewood Flat	353	S285, SE108, SE109, SE110, SE111, SE124, SE125, SE128, SE130, SE132, SE134, SE142, SE145, SE148, SE150A, SE151, SE157A, SE161, SE162, SE163, SE164, SE165, SE166, SE167, SE168, SE169, SE170, SE171, SE172, SE173, SE174, SE175, SE176, SE178, SE179, SE180, SE187, SE188, SE189, SE190, SE192, SE193, SE194, SE195, SE196, SE197, SE198, SE202, SE204, SE208, SE209, SE212, SE215, SE217, SE218, SE219, SE220, SE221, SE232, SE235, SE236, SE238, SE240, SE241, SE244, SE253, SE254, SE255, SE258, SE259, SE260, SE262, SE263, SE264, SE267, SE268, SE269, SE271, SE272, SE276, SE277, SE278, SE279A, SE280A, SE281, SE282, SE287A, SE292A, SE292B, SE293B, SE294, SE296A, SE297A
Inter-Mountain Basins Montane Sagebrush Steppe	222	SE102, SE103, SE104, SE105, SE112, SE113, SE114, SE115, SE118, SE119, SE121, SE122, SE123, SE142, SE163, SE167, SE174, SE197, SE203A, SE205, SE206A, SE207, SE208, SE209, SE210, SE211, SE224A, SE225, SE226, SE228, SE229, SE230, SE231, SE234, SE282
Western Cool Temperate Pasture and Hayland	154	SE106, SE115, SE120, SE131, SE150A, SE150B, SE151, SE174, SE186, SE200, SE215, SE220, SE258, SE262, SE276, SE287A, SE294, SE295
Inter-Mountain Basins Semi-Desert Grassland	113	S285, SE103, SE106, SE107, SE112, SE114, SE115, SE120, SE121, SE122, SE123, SE124, SE125, SE126, SE128, SE129, SE130, SE131, SE132, SE133, SE134, SE136, SE138, SE140, SE142, SE145, SE146, SE147, SE148, SE151, SE154, SE158A, SE160A, SE161, SE162, SE163, SE165, SE167, SE168, SE170, SE172, SE173, SE174, SE177, SE178, SE180, SE183, SE185, SE187, SE188, SE189, SE190, SE191, SE194, SE196, SE198, SE200, SE201, SE203A, SE204, SE205, SE206A, SE207, SE208, SE210, SE211, SE213A, SE214, SE215, SE217, SE220, SE222, SE223, SE224A, SE225, SE226, SE227, SE230, SE231, SE232, SE235, SE237, SE238, SE239, SE246, SE247, SE249, SE253, SE255, SE256, SE259, SE262, SE268, SE269, SE271, SE281, SE282, SE284A, SE287A, SE293A
Rocky Mountain Gambel Oak-Mixed Montane Shrubland	91	SE112, SE113, SE114, SE115, SE118, SE119, SE120, SE121, SE122, SE123, SE126, SE129, SE138, SE142, SE154, SE168, SE174, SE175, SE176, SE177, SE182, SE186, SE203A, SE205, SE206A, SE207, SE226, SE227, SE228, SE229, SE230, SE231, SE234, SE282
Great Basin & Intermountain Introduced Annual Grassland	71	SE102, SE104, SE105, SE106, SE107, SE111, SE112, SE115, SE118, SE119, SE120, SE121, SE122, SE126, SE128, SE133, SE142, SE151, SE154, SE156, SE160A, SE174, SE177, SE220, SE234, SE261, SE268, SE282, SE284A, SE284B, SE287A, SE290
Southern Rocky Mountain Montane-Subalpine Grassland	55	SE102, SE103, SE104, SE105, SE112, SE113, SE114, SE115, SE119, SE122, SE126
Interior West Ruderal Riparian Scrub	41	SE129, SE133, SE150A, SE151, SE156, SE174, SE182, SE186, SE195, SE215, SE220, SE261, SE262, SE275, SE282, SE287A

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Great Basin & Intermountain Introduced Annual and Biennial Forbland	29	S285, SE120, SE121, SE125, SE126, SE128, SE133, SE142, SE150A, SE154, SE156, SE160A, SE161, SE162, SE173, SE174, SE177, SE189, SE194, SE214, SE215, SE220, SE232, SE246, SE253, SE261, SE275, SE282, SE284A, SE284B, SE287A, SE287B
Southern Rocky Mountain Ponderosa Pine Woodland	19	SE102, SE103, SE112, SE113, SE114, SE115, SE118, SE119, SE121, SE122, SE126
Great Basin & Intermountain Introduced Perennial Grassland and Forbland	17	S285, SE102, SE105, SE114, SE115, SE119, SE120, SE121, SE122, SE126, SE128, SE141, SE142, SE146, SE150A, SE170, SE171, SE174, SE177, SE182, SE183, SE200, SE220, SE235, SE237, SE246, SE260, SE262, SE269, SE281, SE282
Interior Western North American Temperate Ruderal Shrubland	10	SE105, SE108, SE109, SE115, SE119, SE129, SE131, SE133, SE138, SE139, SE140, SE143, SE145, SE146, SE150A, SE154, SE186, SE200, SE218, SE282, SE287A
Rocky Mountain Lower Montane-Foothill Riparian Woodland	10	SE112, SE114, SE115, SE122, SE129, SE133, SE151, SE174, SE182, SE186, SE220, SE282
Western Cool Temperate Urban Shrubland	9	SE118, SE119, SE122, SE128, SE129, SE130, SE136, SE145, SE177, SE180, SE181, SE183, SE191, SE200, SE203A, SE204, SE206A, SE216A, SE222, SE224A, SE227, SE249, SE265, SE268, SE269, SE281
Rocky Mountain Lower Montane-Foothill Riparian Shrubland	8	SE114, SE174, SE187, SE220, SE282
Interior West Ruderal Riparian Forest	7	SE133, SE150A, SE151, SE174, SE220, SE282, SE287A
Western Cool Temperate Close Grown Crop	6	SE115, SE150A, SE168, SE173, SE174, SE177, SE182, SE188, SE202, SE210, SE220, SE248, SE287A
Western Cool Temperate Developed Evergreen Forest	5	SE112, SE113, SE114, SE115, SE118, SE119, SE122, SE129, SE136, SE204
North American Arid West Emergent Marsh	4	SE133, SE150A, SE174, SE186, SE220, SE275, SE282, SE287A
Western Cool Temperate Developed Shrubland	4	SE129, SE130, SE145, SE178, SE180, SE189, SE200, SE222, SE227, SE249, SE265, SE269, SE282
Interior Western North American Temperate Ruderal Grassland	4	SE113, SE115, SE126
Rocky Mountain Aspen Forest and Woodland	3	SE115, SE118, SE150A
Western Cool Temperate Urban Herbaceous	3	SE203A, SE206A, SE216A, SE224A
Inter-Mountain Basins Curl-leaf Mountain Mahogany Woodland	2	SE112, SE113, SE115, SE282

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Rocky Mountain Subalpine-Montane Mesic Meadow	2	SE115, SE126, SE269
Western Cool Temperate Urban Evergreen Forest	2	SE112, SE113, SE114, SE115, SE118, SE119
Western Cool Temperate Wheat	2	SE115, SE235, SE294
Western Cool Temperate Fallow/Idle Cropland	1	SE150A, SE182, SE233, SE294
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	1	SE115
Inter-Mountain Basins Subalpine Limber-Bristlecone Pine Woodland	<1	SE112
Rocky Mountain Foothill Limber Pine-Juniper Woodland	<1	SE105
Western North American Ruderal Wet Meadow & Marsh	<1	SE261
Rocky Mountain Alpine-Montane Wet Meadow	<1	SE174
Western Cool Temperate Row Crop	<1	SE111
Grand Total	**114,527**	

* Excludes parcels only conveying subsurface mineral rights or mapped as developed, open water, or quarries.

Table D-3. Vegetation Types Present on Equalization Parcels

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Colorado Plateau Blackbrush-Mormon-tea Shrubland	13	3C, 3D, 7A, 7B, 7C
Great Basin & Intermountain Introduced Annual Grassland	135	3C, 3D, 3E, 7A, 7B, 7C
Great Basin & Intermountain Ruderal Shrubland	88	3C, 7A, 7B, 7C
Great Basin Pinyon-Juniper Woodland	10	3D, 7A, 7B
Mojave Mid-Elevation Mixed Desert Scrub	1,092	3C, 3D, 3E, 7A, 7B, 7C
North American Warm Desert Ruderal & Planted Grassland	6	3C, 7B
North American Warm Desert Ruderal & Planted Scrub	23	3C, 3D, 7A, 7B, 7C

LANDFIRE Vegetation Type*	Acres in Vegetation Analysis Area*	Parcels*
Sonora-Mojave Creosotebush-White Bursage Desert Scrub	625	3C, 3D, 3E, 7A, 7B, 7C
Sonora-Mojave Semi-Desert Chaparral	32	3C, 3D, 7A
Western Warm Temperate Developed Shrubland	<1	3E
Western Warm Temperate Fallow/Idle Cropland	<1	7C
Western Warm Temperate Urban Deciduous Forest	1	7A, 7C
Western Warm Temperate Urban Herbaceous	<1	7B, 7C
Western Warm Temperate Urban Mixed Forest	<1	7B
Western Warm Temperate Urban Shrubland	2	7A, 7B, 7C
Western Warm Temperate Wheat	<1	7B
Grand Total	**2,030**	

* Excludes parcels mapped as developed, open water, or quarries.

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Appendix E Threatened, Endangered, and Candidate Wildlife and Plant Species List by Parcel

September 2023

Table E-1. Plant and Wildlife Species, Critical Habitat, and Range on Land Exchange Parcels

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
1	Monarch butterfly	0	5,836	No
	Yellow-billed cuckoo	0	5,836	No
	North American wolverine	0	5,836	Telemetry records
2	Monarch butterfly	0	3,628	No
	Yellow-billed cuckoo	0	3,628	No
	North American wolverine	0	3,628	Telemetry records
3	Monarch butterfly	0	1,291	No
	Yellow-billed cuckoo	0	1,291	No
	North American wolverine	0	1,291	Telemetry records
4	Monarch butterfly	0	1,215	No
	Yellow-billed cuckoo	0	1,215	No
	North American wolverine	0	1,215	Telemetry records
5	Monarch butterfly	0	2,043	No
	Yellow-billed cuckoo	0	2,043	No
	North American wolverine	0	2,043	Telemetry records
6	Monarch butterfly	0	173	No
	Yellow-billed cuckoo	0	173	No
8	Monarch butterfly	0	929	No
	Yellow-billed cuckoo	0	929	No
9	Monarch butterfly	0	443	No
	Ute ladies'-tresses	0	103	No
	Yellow-billed cuckoo	0	443	No
10	Monarch butterfly	0	321	No
	Ute ladies'-tresses	0	56	No
	Yellow-billed cuckoo	0	321	No
11	Monarch butterfly	0	1,295	No
	Ute ladies'-tresses	0	364	No
	Yellow-billed cuckoo	0	1,295	No
12	Monarch butterfly	0	644	No
	Ute ladies'-tresses	0	241	No
	Yellow-billed cuckoo	0	644	No
13	California condor	0	324	No
	Monarch butterfly	0	324	No
	Ute ladies'-tresses	0	53	No
	Yellow-billed cuckoo	0	324	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
15	Canada lynx	0	61	No
	Monarch butterfly	0	61	No
	Yellow-billed cuckoo	0	61	No
17	Canada lynx	0	294	No
	Monarch butterfly	0	294	No
	Yellow-billed cuckoo	0	294	No
20	Canada lynx	0	395	No
	Monarch butterfly	0	395	No
	Yellow-billed cuckoo	0	395	No
21	Monarch butterfly	0	360	No
	Yellow-billed cuckoo	0	360	No
23	Mexican spotted owl	0	494	No
	Monarch butterfly	0	643	No
	San Rafael cactus	0	643	No
	Southwestern willow flycatcher	0	175	No
	Ute ladies'-tresses	0	263	No
	Yellow-billed cuckoo	0	643	No
24	Mexican spotted owl	0	350	No
	Monarch butterfly	0	895	No
	San Rafael cactus	0	895	No
	Southwestern willow flycatcher	0	492	No
	Ute ladies'-tresses	0	287	No
	Yellow-billed cuckoo	0	895	No
25	Mexican spotted owl	0	547	No
	Monarch butterfly	0	843	No
	San Rafael cactus	0	843	No
	Southwestern willow flycatcher	0	534	No
	Ute ladies'-tresses	0	136	No
	Yellow-billed cuckoo	0	843	No
26	Mexican spotted owl	0	583	No
	Monarch butterfly	0	893	No
	San Rafael cactus	0	893	Yes
	Southwestern willow flycatcher	0	171	No
	Ute ladies'-tresses	0	338	No
	Yellow-billed cuckoo	0	893	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
27	Last chance townsendia	0	121	No
	Monarch butterfly	0	121	No
	San Rafael cactus	0	121	No
	Southwestern willow flycatcher	0	84	No
	Yellow-billed cuckoo	0	121	No
28	Jones cycladenia	0	49	No
	Monarch butterfly	0	4,920	No
	San Rafael cactus	0	4,920	No
	Southwestern willow flycatcher	0	6	No
	Yellow-billed cuckoo	0	4,920	No
29	Monarch butterfly	0	241	No
	San Rafael cactus	0	241	No
	Southwestern willow flycatcher	0	84	No
	Yellow-billed cuckoo	0	241	No
30	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
32	Mexican spotted owl	0	715	No
	Monarch butterfly	0	1,166	No
	Southwestern willow flycatcher	0	471	No
	Yellow-billed cuckoo	0	1,166	No
	Navajo sedge	0	950	No
33	Monarch butterfly	0	329	No
	Yellow-billed cuckoo	0	329	No
34	Monarch butterfly	0	1,058	No
	Yellow-billed cuckoo	0	1,058	No
35	Monarch butterfly	0	2,392	No
	Ute ladies'-tresses	0	1,252	No
	Yellow-billed cuckoo	0	2,392	No
36	Monarch butterfly	0	4,122	No
	Ute ladies'-tresses	0	1,124	No
	Yellow-billed cuckoo	0	4,122	No
37	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	276	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
38	Monarch butterfly	0	17,986	No
	Ute ladies'-tresses	0	6,143	No
	Yellow-billed cuckoo	0	17,986	No
39	Monarch butterfly	0	2,973	No
	Ute ladies'-tresses	0	1,172	No
	Yellow-billed cuckoo	0	2,973	No
40	Monarch butterfly	0	1,336	No
	Ute ladies'-tresses	0	502	No
	Yellow-billed cuckoo	0	1,336	No
41	Monarch butterfly	0	2,692	No
	Yellow-billed cuckoo	0	2,692	No
42	Monarch butterfly	0	2,916	No
	Ute ladies'-tresses	0	932	No
	Yellow-billed cuckoo	0	2,916	No
43	Monarch butterfly	0	1,121	No
	Utah prairie dog	0	1,121	No
	Ute ladies'-tresses	0	210	No
	Yellow-billed cuckoo	0	1,121	No
44	Monarch butterfly	0	301	No
	Utah prairie dog	0	301	No
	Yellow-billed cuckoo	0	301	No
46	Mexican spotted owl	0	723	No
	Monarch butterfly	0	1,281	No
	Ute ladies'-tresses	0	259	No
	Yellow-billed cuckoo	0	1,281	No
47	Mexican spotted owl	0	874	No
	Monarch butterfly	0	874	No
	Southwestern willow flycatcher	0	851	No
	Ute ladies'-tresses	0	410	No
	Yellow-billed cuckoo	0	874	No
48	Mexican spotted owl	0	1,625	No
	Monarch butterfly	0	1,895	No
	Southwestern willow flycatcher	0	564	No
	Ute ladies'-tresses	0	466	No
	Yellow-billed cuckoo	0	1,895	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
49	Last chance townsendia	0	1,279	Yes
	Monarch butterfly	0	1,279	No
	San Rafael cactus	0	1,279	No
	Utah prairie dog	0	626	No
	Yellow-billed cuckoo	0	1,279	No
50	Last chance townsendia	0	897	Yes
	Monarch butterfly	0	897	No
	San Rafael cactus	0	897	No
	Southwestern willow flycatcher	0	2	No
	Wright fishhook cactus	0	634	No
	Yellow-billed cuckoo	0	897	No
53	Mexican spotted owl	0	744	No
	Monarch butterfly	0	1,615	No
	Ute ladies'-tresses	0	327	Yes
	Yellow-billed cuckoo	0	1,615	No
54	Mexican spotted owl	0	372	No
	Monarch butterfly	0	5,756	No
	San Rafael cactus	0	4,397	No
	Yellow-billed cuckoo	0	5,756	No
2S	Monarch butterfly	0	768	No
	Yellow-billed cuckoo	0	768	No
	North American wolverine	0	768	Telemetry records
35M	Monarch butterfly	0	371	No
	Ute ladies'-tresses	0	218	No
	Yellow-billed cuckoo	0	371	No
38M	Monarch butterfly	0	364	No
	Ute ladies'-tresses	0	113	No
	Yellow-billed cuckoo	0	364	No
38S	Monarch butterfly	0	682	No
	Ute ladies'-tresses	0	356	No
	Yellow-billed cuckoo	0	682	No
39S	Monarch butterfly	0	655	No
	Ute ladies'-tresses	0	273	No
	Yellow-billed cuckoo	0	655	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
3C	Desert tortoise	325	325	Yes
	Mexican spotted owl	0	44	No
	Monarch butterfly	0	325	No
	Southwestern willow flycatcher	0	45	No
	Yellow-billed cuckoo	0	325	No
3D	Desert tortoise	228	228	Yes
	Mexican spotted owl	0	169	No
	Monarch butterfly	0	228	No
	Southwestern willow flycatcher	0	24	No
	Yellow-billed cuckoo	0	228	No
3E	Desert tortoise	91	91	Yes
	Mexican spotted owl	0	69	No
	Monarch butterfly	0	91	No
	Yellow-billed cuckoo	0	91	No
3S	Monarch butterfly	0	240	No
	Yellow-billed cuckoo	0	240	No
	North American wolverine	0	240	Telemetry records
46C	Mexican spotted owl	0	12	No
	Monarch butterfly	0	119	No
	Ute ladies'-tresses	0	8	No
	Yellow-billed cuckoo	0	119	No
51M	Monarch butterfly	0	481	No
	Ute ladies'-tresses	0	86	No
	Yellow-billed cuckoo	0	481	No
52M	Monarch butterfly	0	3,215	No
	Ute ladies'-tresses	0	95	No
	Yellow-billed cuckoo	0	3,215	No
53M	Monarch butterfly	0	395	No
	Ute ladies'-tresses	0	241	Yes
	Yellow-billed cuckoo	0	395	No
53OG	Mexican spotted owl	0	47	No
	Monarch butterfly	0	481	No
	Ute ladies'-tresses	0	217	Yes
	Yellow-billed cuckoo	0	481	No
5S	Monarch butterfly	0	1,904	No
	Yellow-billed cuckoo	0	1,904	No
	North American wolverine	0	1,904	Telemetry records

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
7A	Desert tortoise	446	446	Yes
	Mexican spotted owl	0	446	No
	Monarch butterfly	0	446	No
	Southwestern willow flycatcher	0	182	No
	Yellow-billed cuckoo	0	446	No
7B	Desert tortoise	563	563	Yes
	Mexican spotted owl	0	507	No
	Monarch butterfly	0	563	No
	Southwestern willow flycatcher	0	522	No
	Yellow-billed cuckoo	0	563	No
7C	Desert tortoise	377	377	Yes
	Mexican spotted owl	0	289	No
	Monarch butterfly	0	377	No
	Southwestern willow flycatcher	0	17	No
	Yellow-billed cuckoo	0	377	No
S285	Barneby reed-mustard	0	656	No
	Mexican spotted owl	0	650	No
	Monarch butterfly	0	656	No
	San Rafael cactus	0	656	No
	Wright fishhook cactus	0	656	Yes
	Yellow-billed cuckoo	0	656	No
SE101	Mexican spotted owl	0	58	No
	Monarch butterfly	0	158	No
	Yellow-billed cuckoo	0	158	No
SE102	Mexican spotted owl	0	119	No
	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	183	No
	Yellow-billed cuckoo	0	639	No
SE103	Mexican spotted owl	0	630	No
	Monarch butterfly	0	630	No
	Ute ladies'-tresses	0	409	No
	Yellow-billed cuckoo	0	630	No
SE104	Mexican spotted owl	0	727	No
	Monarch butterfly	0	727	No
	Ute ladies'-tresses	0	433	No
	Yellow-billed cuckoo	0	714	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE105	Mexican spotted owl	0	638	No
	Monarch butterfly	0	666	No
	Ute ladies'-tresses	0	201	No
	Yellow-billed cuckoo	0	666	No
SE106	Mexican spotted owl	0	391	No
	Monarch butterfly	0	636	No
	Yellow-billed cuckoo	0	636	No
SE107	Monarch butterfly	0	199	No
	Yellow-billed cuckoo	0	199	No
SE108	Monarch butterfly	0	80	No
	Yellow-billed cuckoo	0	80	No
SE109	Mexican spotted owl	0	53	No
	Monarch butterfly	0	320	No
	Yellow-billed cuckoo	0	320	No
SE110	Monarch butterfly	0	120	No
	Ute ladies'-tresses	0	56	No
	Yellow-billed cuckoo	0	120	No
SE111	Monarch butterfly	0	643	No
	Yellow-billed cuckoo	0	643	No
SE112	Mexican spotted owl	637	637	No
	Monarch butterfly	0	637	No
	Southwestern willow flycatcher	0	104	No
	Ute ladies'-tresses	0	104	No
	Yellow-billed cuckoo	0	637	No
SE113	Mexican spotted owl	635	635	No
	Monarch butterfly	0	635	No
	Ute ladies'-tresses	0	2	No
	Yellow-billed cuckoo	0	635	No
SE114	Mexican spotted owl	635	635	No
	Monarch butterfly	0	635	No
	Ute ladies'-tresses	0	243	No
	Yellow-billed cuckoo	0	635	No
SE115	Mexican spotted owl	619	619	No
	Monarch butterfly	0	619	No
	Southwestern willow flycatcher	0	431	No
	Ute ladies'-tresses	0	122	No
	Yellow-billed cuckoo	0	619	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE116	Mexican spotted owl	80	80	No
	Monarch butterfly	0	80	No
	Yellow-billed cuckoo	0	80	No
SE117	Mexican spotted owl	74	80	No
	Monarch butterfly	0	80	No
	Yellow-billed cuckoo	0	80	No
SE118	Mexican spotted owl	639	639	No
	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	26	No
	Yellow-billed cuckoo	0	639	No
SE119	Mexican spotted owl	639	639	No
	Monarch butterfly	0	639	No
	Southwestern willow flycatcher	0	317	No
	Ute ladies'-tresses	0	254	No
	Yellow-billed cuckoo	0	639	No
SE120	Jones cycladenia	0	320	No
	Mexican spotted owl	320	320	No
	Monarch butterfly	0	320	No
	Southwestern willow flycatcher	0	58	No
	Ute ladies'-tresses	0	272	No
	Yellow-billed cuckoo	0	320	No
SE121	Jones cycladenia	0	640	No
	Mexican spotted owl	640	640	No
	Monarch butterfly	0	640	No
	Ute ladies'-tresses	0	621	No
	Yellow-billed cuckoo	0	640	No
SE122	Mexican spotted owl	647	647	No
	Monarch butterfly	0	647	No
	Ute ladies'-tresses	0	469	No
	Yellow-billed cuckoo	0	647	No
SE123	Mexican spotted owl	66	639	No
	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	94	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE124	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	Southwestern willow flycatcher	0	98	No
	Yellow-billed cuckoo	0	639	No
SE125	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	Ute ladies'-tresses	0	104	No
	Yellow-billed cuckoo	0	640	No
SE126	Mexican spotted owl	638	638	No
	Monarch butterfly	0	638	No
	Ute ladies'-tresses	0	475	No
	Yellow-billed cuckoo	0	638	No
SE127	Mexican spotted owl	0	120	No
	Monarch butterfly	0	120	No
	Southwestern willow flycatcher	0	120	No
	Yellow-billed cuckoo	0	120	No
SE128	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	Ute ladies'-tresses	0	104	No
	Yellow-billed cuckoo	0	638	No
SE129	Mexican spotted owl	0	320	No
	Monarch butterfly	0	320	No
	Southwestern willow flycatcher	0	315	No
	Ute ladies'-tresses	0	3	No
	Yellow-billed cuckoo	0	320	No
SE130	Mexican spotted owl	0	635	No
	Monarch butterfly	0	635	No
	Ute ladies'-tresses	0	19	No
	Yellow-billed cuckoo	0	635	No
SE131	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	463	No
	Southwestern willow flycatcher	0	594	No
	Ute ladies'-tresses	0	32	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE132	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	430	No
	Yellow-billed cuckoo	0	639	No
SE133	Bonytail	0	499	No
	Humpback chub	0	499	No
	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	Razorback sucker	0	499	No
	Southwestern willow flycatcher	0	638	No
	Ute ladies'-tresses	0	97	No
	Yellow-billed cuckoo	0	638	No
SE134	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	Southwestern willow flycatcher	0	24	No
	Ute ladies'-tresses	0	248	No
	Yellow-billed cuckoo	0	640	No
SE135A	Mexican spotted owl	0	40	No
	Monarch butterfly	0	40	No
	Yellow-billed cuckoo	0	40	No
SE135B	Mexican spotted owl	0	40	No
	Monarch butterfly	0	40	No
	Yellow-billed cuckoo	0	40	No
SE136	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	Ute ladies'-tresses	0	200	No
	Yellow-billed cuckoo	0	638	No
SE137	Bonytail	0	77	No
	Humpback chub	0	77	No
	Mexican spotted owl	0	77	No
	Monarch butterfly	0	77	No
	Razorback sucker	0	77	No
	Southwestern willow flycatcher	0	77	No
	Ute ladies'-tresses	0	0	No
	Yellow-billed cuckoo	0	77	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE138	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	Southwestern willow flycatcher	0	262	No
	Ute ladies'-tresses	0	273	No
	Yellow-billed cuckoo	0	639	No
SE139	Mexican spotted owl	0	160	No
	Monarch butterfly	0	160	No
	Ute ladies'-tresses	0	16	No
	Yellow-billed cuckoo	0	160	No
SE140	Mexican spotted owl	0	775	No
	Monarch butterfly	0	775	No
	Southwestern willow flycatcher	0	79	No
	Ute ladies'-tresses	0	221	No
	Yellow-billed cuckoo	0	775	No
SE141	Mexican spotted owl	0	639	No
	Monarch butterfly	0	641	No
	Ute ladies'-tresses	0	265	No
	Yellow-billed cuckoo	0	641	No
SE142	Mexican spotted owl	0	641	No
	Monarch butterfly	0	641	No
	San Rafael cactus	0	252	No
	Ute ladies'-tresses	0	593	No
	Yellow-billed cuckoo	0	641	No
SE143	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	516	No
	Ute ladies'-tresses	0	178	No
	Yellow-billed cuckoo	0	640	No
SE144	Mexican spotted owl	0	457	No
	Monarch butterfly	0	457	No
	Southwestern willow flycatcher	0	72	No
	Ute ladies'-tresses	0	102	No
	Yellow-billed cuckoo	0	457	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE145	Mexican spotted owl	0	641	No
	Monarch butterfly	0	641	No
	Southwestern willow flycatcher	0	4	No
	Ute ladies'-tresses	0	142	No
	Yellow-billed cuckoo	0	641	No
SE146	Mexican spotted owl	0	641	No
	Monarch butterfly	0	641	No
	San Rafael cactus	0	88	No
	Ute ladies'-tresses	0	332	No
	Yellow-billed cuckoo	0	641	No
SE147	Mexican spotted owl	0	654	No
	Monarch butterfly	0	654	No
	Ute ladies'-tresses	0	402	No
	Yellow-billed cuckoo	0	654	No
SE148	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	557	No
	Ute ladies'-tresses	0	410	No
	Yellow-billed cuckoo	0	639	No
SE149	Bonytail	<1	88	Yes
	Colorado pikeminnow (=squawfish)	1	88	No
	Humpback chub	<1	88	No
	Mexican spotted owl	0	88	No
	Monarch butterfly	0	88	No
	Razorback sucker	1	88	No
	San Rafael cactus	0	88	No
	Southwestern willow flycatcher	0	88	No
	Yellow-billed cuckoo	0	88	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE150A	Bonytail	0	239	Yes
	Colorado pikeminnow (=squawfish)	<1	192	No
	Humpback chub	0	239	No
	Mexican spotted owl	0	30	No
	Monarch butterfly	0	628	No
	Razorback sucker	<1	239	Yes
	San Rafael cactus	0	338	No
	Southwestern willow flycatcher	0	473	No
	Yellow-billed cuckoo	0	628	No
SE150B	Bonytail	0	1	Yes
	Colorado pikeminnow (=squawfish)	<1	1	No
	Humpback chub	0	1	No
	Monarch butterfly	0	1	No
	Razorback sucker	<1	1	Yes
	Southwestern willow flycatcher	0	1	Yes
	Yellow-billed cuckoo	0	1	Yes
SE151	Bonytail	0	138	No
	Humpback chub	0	138	No
	Mexican spotted owl	0	0	No
	Monarch butterfly	0	636	No
	Razorback sucker	0	138	No
	San Rafael cactus	0	633	No
	Southwestern willow flycatcher	0	270	No
	Yellow-billed cuckoo	0	636	No
SE152	Mexican spotted owl	0	625	No
	Monarch butterfly	0	631	No
	San Rafael cactus	0	435	No
	Southwestern willow flycatcher	0	186	No
	Yellow-billed cuckoo	0	631	No
SE153	Mexican spotted owl	0	544	No
	Monarch butterfly	0	657	No
	San Rafael cactus	0	221	No
	Yellow-billed cuckoo	0	657	No
SE154	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE155	Mexican spotted owl	0	120	No
	Monarch butterfly	0	120	No
	Southwestern willow flycatcher	0	40	No
	Yellow-billed cuckoo	0	120	No
SE156	Mexican spotted owl	0	354	No
	Monarch butterfly	0	596	No
	Yellow-billed cuckoo	0	596	No
SE157A	Mexican spotted owl	0	51	No
	Monarch butterfly	0	614	No
	Southwestern willow flycatcher	0	195	No
	Yellow-billed cuckoo	0	614	No
SE157B	Mexican spotted owl	0	10	No
	Monarch butterfly	0	25	No
	Southwestern willow flycatcher	0	0	No
	Yellow-billed cuckoo	0	25	No
SE158A	Mexican spotted owl	0	196	No
	Monarch butterfly	0	613	No
	Yellow-billed cuckoo	0	613	No
SE158B	Mexican spotted owl	0	18	No
	Monarch butterfly	0	26	No
	Yellow-billed cuckoo	0	26	No
SE159	Mexican spotted owl	0	40	No
	Monarch butterfly	0	40	No
	Southwestern willow flycatcher	0	40	No
	Yellow-billed cuckoo	0	40	No
SE160A	Monarch butterfly	0	153	No
	Yellow-billed cuckoo	0	153	No
SE160B	Monarch butterfly	0	6	No
	Yellow-billed cuckoo	0	6	No
SE161	Mexican spotted owl	0	305	No
	Monarch butterfly	0	680	No
	San Rafael cactus	0	680	No
	Southwestern willow flycatcher	0	180	No
	Ute ladies'-tresses	0	239	No
	Yellow-billed cuckoo	0	680	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE162	Mexican spotted owl	0	404	No
	Monarch butterfly	0	642	No
	San Rafael cactus	0	642	Yes
	Southwestern willow flycatcher	0	39	No
	Yellow-billed cuckoo	0	642	No
SE163	Mexican spotted owl	0	318	No
	Monarch butterfly	0	399	No
	San Rafael cactus	0	399	No
	Southwestern willow flycatcher	0	0	No
	Ute ladies'-tresses	0	7	No
	Yellow-billed cuckoo	0	399	No
SE164	Mexican spotted owl	0	80	No
	Monarch butterfly	0	80	No
	San Rafael cactus	0	80	No
	Ute ladies'-tresses	0	21	No
	Yellow-billed cuckoo	0	80	No
SE165	Mexican spotted owl	0	609	No
	Monarch butterfly	0	635	No
	San Rafael cactus	0	635	Yes
	Southwestern willow flycatcher	0	28	No
	Ute ladies'-tresses	0	179	No
	Yellow-billed cuckoo	0	635	No
SE166	Mexican spotted owl	0	80	No
	Monarch butterfly	0	80	No
	San Rafael cactus	0	80	No
	Ute ladies'-tresses	0	3	No
	Yellow-billed cuckoo	0	80	No
SE167	Mexican spotted owl	0	506	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Ute ladies'-tresses	0	68	No
	Yellow-billed cuckoo	0	639	No
SE168	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	622	No
	Ute ladies'-tresses	0	352	No
	Yellow-billed cuckoo	0	638	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE169	Mexican spotted owl	0	637	No
	Monarch butterfly	0	637	No
	San Rafael cactus	0	515	No
	Southwestern willow flycatcher	0	36	No
	Ute ladies'-tresses	0	392	No
	Yellow-billed cuckoo	0	637	No
SE170	Mexican spotted owl	0	630	No
	Monarch butterfly	0	775	No
	San Rafael cactus	0	662	No
	Southwestern willow flycatcher	0	124	No
	Ute ladies'-tresses	0	200	No
	Yellow-billed cuckoo	0	775	No
SE171	Mexican spotted owl	0	72	No
	Monarch butterfly	0	399	No
	San Rafael cactus	0	399	No
	Southwestern willow flycatcher	0	107	No
	Yellow-billed cuckoo	0	399	No
SE172	Mexican spotted owl	0	631	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	612	No
	Yellow-billed cuckoo	0	639	No
SE173	Mexican spotted owl	0	37	No
	Monarch butterfly	0	693	No
	San Rafael cactus	0	693	Yes
	Southwestern willow flycatcher	0	227	No
	Yellow-billed cuckoo	0	693	No
SE174	Mexican spotted owl	0	636	No
	Monarch butterfly	0	636	No
	San Rafael cactus	0	636	No
	Southwestern willow flycatcher	0	472	No
	Ute ladies'-tresses	0	403	No
	Yellow-billed cuckoo	0	636	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE175	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	557	No
	Ute ladies'-tresses	0	330	No
	Yellow-billed cuckoo	0	639	No
SE176	Mexican spotted owl	0	319	No
	Monarch butterfly	0	319	No
	San Rafael cactus	0	319	No
	Ute ladies'-tresses	0	275	No
	Yellow-billed cuckoo	0	319	No
SE177	Mexican spotted owl	0	694	No
	Monarch butterfly	0	694	No
	San Rafael cactus	0	692	No
	Ute ladies'-tresses	0	614	No
	Yellow-billed cuckoo	0	694	No
SE178	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	28	No
	Ute ladies'-tresses	0	93	No
	Yellow-billed cuckoo	0	639	No
SE179	Mexican spotted owl	0	263	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE180	Mexican spotted owl	0	641	No
	Monarch butterfly	0	641	No
	San Rafael cactus	0	551	No
	Ute ladies'-tresses	0	374	No
	Yellow-billed cuckoo	0	641	No
SE181	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	627	No
	Ute ladies'-tresses	0	477	No
	Yellow-billed cuckoo	0	640	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE182	Mexican spotted owl	0	637	No
	Monarch butterfly	0	637	No
	San Rafael cactus	0	637	No
	Ute ladies'-tresses	0	358	No
	Yellow-billed cuckoo	0	637	No
SE183	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	394	No
	Ute ladies'-tresses	0	331	No
	Yellow-billed cuckoo	0	638	No
SE184	Mexican spotted owl	0	633	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	524	No
	Yellow-billed cuckoo	0	640	No
SE185	Mexican spotted owl	0	320	No
	Monarch butterfly	0	320	No
	San Rafael cactus	0	320	No
	Ute ladies'-tresses	0	17	No
	Yellow-billed cuckoo	0	320	No
SE186	Mexican spotted owl	0	370	No
	Monarch butterfly	0	370	No
	San Rafael cactus	0	316	No
	Southwestern willow flycatcher	0	48	No
	Ute ladies'-tresses	0	194	No
	Yellow-billed cuckoo	0	370	No
SE187	Last chance townsendia	0	119	No
	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	631	No
	Southwestern willow flycatcher	0	123	No
	Ute ladies'-tresses	0	219	No
	Yellow-billed cuckoo	0	640	No
SE188	Mexican spotted owl	0	788	No
	Monarch butterfly	0	871	No
	San Rafael cactus	0	536	No
	Ute ladies'-tresses	0	255	No
	Yellow-billed cuckoo	0	871	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE189	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	571	No
	Ute ladies'-tresses	0	349	No
	Yellow-billed cuckoo	0	639	No
SE190	Mexican spotted owl	0	440	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	195	No
	Ute ladies'-tresses	0	70	No
	Yellow-billed cuckoo	0	639	No
SE191	Mexican spotted owl	0	612	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	167	No
	Ute ladies'-tresses	0	81	No
	Yellow-billed cuckoo	0	639	No
SE192	Mexican spotted owl	0	379	No
	Monarch butterfly	0	867	No
	San Rafael cactus	0	867	No
	Ute ladies'-tresses	0	54	No
	Yellow-billed cuckoo	0	867	No
SE193	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	260	No
	Yellow-billed cuckoo	0	639	No
SE194	Mexican spotted owl	0	241	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	157	No
	Yellow-billed cuckoo	0	639	No
SE195	Mexican spotted owl	0	285	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	300	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE196	Mexican spotted owl	0	555	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE197	Mexican spotted owl	0	65	No
	Monarch butterfly	0	413	No
	San Rafael cactus	0	413	No
	Southwestern willow flycatcher	0	158	No
	Ute ladies'-tresses	0	79	No
	Yellow-billed cuckoo	0	413	No
SE198	Mexican spotted owl	0	635	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	8	No
	Yellow-billed cuckoo	0	639	No
SE199	Mexican spotted owl	0	656	No
	Monarch butterfly	0	658	No
	San Rafael cactus	0	658	No
	Southwestern willow flycatcher	0	4	No
	Yellow-billed cuckoo	0	658	No
SE200	Jones cycladenia	0	638	No
	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	429	No
	Ute ladies'-tresses	0	136	No
	Yellow-billed cuckoo	0	638	No
SE201	Last chance townsendia	0	639	No
	Mexican spotted owl	0	625	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	5	No
	Ute ladies'-tresses	0	231	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE202	Last chance townsendia	0	640	Yes
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	640	No
	Southwestern willow flycatcher	0	609	No
	Ute ladies'-tresses	0	163	No
	Yellow-billed cuckoo	0	640	No
SE203A	Last chance townsendia	0	511	No
	Mexican spotted owl	0	406	No
	Monarch butterfly	0	511	No
	Southwestern willow flycatcher	0	491	No
	Ute ladies'-tresses	0	140	No
	Yellow-billed cuckoo	0	511	No
SE203B	Last chance townsendia	0	127	No
	Mexican spotted owl	0	101	No
	Monarch butterfly	0	127	No
	Southwestern willow flycatcher	0	126	No
	Ute ladies'-tresses	0	7	No
	Yellow-billed cuckoo	0	127	No
SE204	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	379	No
	Ute ladies'-tresses	0	246	No
	Yellow-billed cuckoo	0	639	No
SE205	Last chance townsendia	0	11	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	Ute ladies'-tresses	0	310	No
	Yellow-billed cuckoo	0	639	No
SE206A	Last chance townsendia	0	543	No
	Mexican spotted owl	0	543	No
	Monarch butterfly	0	543	No
	Southwestern willow flycatcher	0	93	No
	Ute ladies'-tresses	0	64	No
	Yellow-billed cuckoo	0	543	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE206B	Last chance townsendia	0	98	No
	Mexican spotted owl	0	98	No
	Monarch butterfly	0	98	No
	Southwestern willow flycatcher	0	2	No
	Yellow-billed cuckoo	0	98	No
SE207	Monarch butterfly	0	639	No
	San Rafael cactus	0	183	No
	Southwestern willow flycatcher	0	428	No
	Ute ladies'-tresses	0	169	No
	Yellow-billed cuckoo	0	639	No
SE208	Mexican spotted owl	0	450	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE209	Mexican spotted owl	0	523	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Ute ladies'-tresses	0	14	No
	Yellow-billed cuckoo	0	639	No
SE210	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	134	No
	Ute ladies'-tresses	0	70	No
	Yellow-billed cuckoo	0	639	No
SE211	Mexican spotted owl	0	45	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE212	Mexican spotted owl	0	558	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	621	No
	Southwestern willow flycatcher	0	12	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE213A	Monarch butterfly	0	596	No
	San Rafael cactus	0	596	No
	Southwestern willow flycatcher	0	446	No
	Ute ladies'-tresses	0	39	No
	Yellow-billed cuckoo	0	596	No
SE213B	Monarch butterfly	0	43	No
	San Rafael cactus	0	43	No
	Southwestern willow flycatcher	0	23	No
	Ute ladies'-tresses	0	4	No
	Yellow-billed cuckoo	0	43	No
SE214	Mexican spotted owl	0	314	No
	Monarch butterfly	0	418	No
	San Rafael cactus	0	418	No
	Yellow-billed cuckoo	0	418	No
SE215	Mexican spotted owl	0	128	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	390	No
	Ute ladies'-tresses	0	179	No
	Yellow-billed cuckoo	0	639	No
SE216A	Jones cycladenia	0	500	No
	Mexican spotted owl	0	500	No
	Monarch butterfly	0	500	No
	San Rafael cactus	0	500	No
	Ute ladies'-tresses	0	104	No
	Yellow-billed cuckoo	0	500	No
SE216B	Jones cycladenia	0	2	No
	Mexican spotted owl	0	2	No
	Monarch butterfly	0	2	No
	San Rafael cactus	0	2	No
	Yellow-billed cuckoo	0	2	No
SE216C	Jones cycladenia	0	155	No
	Mexican spotted owl	0	155	No
	Monarch butterfly	0	155	No
	San Rafael cactus	0	155	No
	Yellow-billed cuckoo	0	155	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE217	Jones cycladenia	0	424	No
	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
SE218	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	640	No
	Ute ladies'-tresses	0	35	No
	Yellow-billed cuckoo	0	640	No
SE219	Jones cycladenia	0	643	Yes
	Mexican spotted owl	0	1	No
	Monarch butterfly	0	643	No
	San Rafael cactus	0	643	No
	Yellow-billed cuckoo	0	643	No
SE220	Last chance townsendia	0	640	No
	Mexican spotted owl	0	185	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	640	No
	Southwestern willow flycatcher	0	292	No
	Ute ladies'-tresses	0	70	No
	Wright fishhook cactus	0	640	No
	Yellow-billed cuckoo	0	640	No
SE221	Last chance townsendia	0	639	No
	Mexican spotted owl	0	268	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Wright fishhook cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE222	Last chance townsendia	0	639	No
	Mexican spotted owl	0	285	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE223	Last chance townsendia	0	386	No
	Mexican spotted owl	0	70	No
	Monarch butterfly	0	386	No
	San Rafael cactus	0	386	No
	Yellow-billed cuckoo	0	386	No
SE224A	Last chance townsendia	0	604	Yes
	Mexican spotted owl	0	9	No
	Monarch butterfly	0	604	No
	Southwestern willow flycatcher	0	211	No
	Yellow-billed cuckoo	0	604	No
SE224B	Last chance townsendia	0	36	No
	Monarch butterfly	0	36	No
	Southwestern willow flycatcher	0	7	No
	Yellow-billed cuckoo	0	36	No
SE225	Last chance townsendia	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	495	No
	Yellow-billed cuckoo	0	638	No
SE226	Last chance townsendia	0	639	No
	Mexican spotted owl	0	438	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	316	No
	Southwestern willow flycatcher	0	54	No
	Yellow-billed cuckoo	0	639	No
SE227	Last chance townsendia	0	638	No
	Mexican spotted owl	0	120	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
SE228	Monarch butterfly	0	639	No
	San Rafael cactus	0	283	No
	Southwestern willow flycatcher	0	597	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE229	Mexican spotted owl	0	141	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	400	No
	Southwestern willow flycatcher	0	543	No
	Yellow-billed cuckoo	0	639	No
SE230	Last chance townsendia	0	66	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	640	No
	Southwestern willow flycatcher	0	247	No
	Yellow-billed cuckoo	0	640	No
SE231	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	183	No
	Yellow-billed cuckoo	0	639	No
SE232	Mexican spotted owl	0	620	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	506	No
	Yellow-billed cuckoo	0	639	No
SE233	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	419	No
	Yellow-billed cuckoo	0	639	No
SE234	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	1	No
	Yellow-billed cuckoo	0	639	No
SE235	Mexican spotted owl	0	608	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Ute ladies'-tresses	0	36	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE236	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	515	No
	Southwestern willow flycatcher	0	606	No
	Ute ladies'-tresses	0	93	No
	Yellow-billed cuckoo	0	639	No
SE237	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE238	Mexican spotted owl	0	417	No
	Monarch butterfly	0	417	No
	San Rafael cactus	0	417	No
	Yellow-billed cuckoo	0	417	No
SE239	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	595	No
	Ute ladies'-tresses	0	87	No
	Yellow-billed cuckoo	0	639	No
SE240	Jones cycladenia	0	514	No
	Mexican spotted owl	0	484	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
SE241	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	434	No
	Yellow-billed cuckoo	0	640	No
SE242	Mexican spotted owl	0	637	No
	Monarch butterfly	0	637	No
	San Rafael cactus	0	70	No
	Ute ladies'-tresses	0	33	No
	Yellow-billed cuckoo	0	637	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE243	Last chance townsendia	0	639	No
	Mexican spotted owl	0	152	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE244	Last chance townsendia	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	625	No
	Wright fishhook cactus	0	637	No
	Yellow-billed cuckoo	0	639	No
SE245	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	94	No
	Wright fishhook cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE246	Barneby reed-mustard	0	519	No
	Last chance townsendia	0	519	No
	Mexican spotted owl	0	519	No
	Monarch butterfly	0	519	No
	San Rafael cactus	0	519	No
	Southwestern willow flycatcher	0	175	No
	Yellow-billed cuckoo	0	519	No
SE247	Last chance townsendia	0	877	No
	Mexican spotted owl	0	8	No
	Monarch butterfly	0	877	No
	San Rafael cactus	0	877	No
	Yellow-billed cuckoo	0	877	No
SE248	Barneby reed-mustard	0	370	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	488	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE249	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No
SE250	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	535	No
	Mexican spotted owl	0	2	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	174	No
	Yellow-billed cuckoo	0	639	No
SE251	Mexican spotted owl	0	350	No
	Monarch butterfly	0	878	No
	San Rafael cactus	0	878	No
	Southwestern willow flycatcher	0	259	No
	Yellow-billed cuckoo	0	878	No
SE252	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE253	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	113	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	359	No
	Yellow-billed cuckoo	0	639	No
SE254	Barneby reed-mustard	0	3	No
	Mexican spotted owl	0	625	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	184	No
	Yellow-billed cuckoo	0	639	No
SE255	Mexican spotted owl	0	871	No
	Monarch butterfly	0	879	No
	San Rafael cactus	0	856	No
	Yellow-billed cuckoo	0	879	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE256	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE257	Mexican spotted owl	0	494	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	3	No
	Yellow-billed cuckoo	0	639	No
SE258	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	246	No
	Ute ladies'-tresses	0	189	No
	Yellow-billed cuckoo	0	639	No
SE259	Mexican spotted owl	0	830	No
	Monarch butterfly	0	830	No
	San Rafael cactus	0	815	No
	Ute ladies'-tresses	0	166	No
	Yellow-billed cuckoo	0	830	No
SE260	Mexican spotted owl	0	640	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	640	No
	Ute ladies'-tresses	0	44	No
	Yellow-billed cuckoo	0	640	No
SE261	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	61	No
	Yellow-billed cuckoo	0	639	No
SE262	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	525	No
	Southwestern willow flycatcher	0	416	No
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE263	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	Yes
	Mexican spotted owl	0	632	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	571	No
	Yellow-billed cuckoo	0	639	No
SE264	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	Yes
	Mexican spotted owl	0	334	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Winkler cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE265	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	Yes
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	169	No
	Yellow-billed cuckoo	0	639	No
SE266	Barneby reed-mustard	0	638	No
	Last chance townsendia	0	638	No
	Mexican spotted owl	0	424	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Southwestern willow flycatcher	0	241	No
	Yellow-billed cuckoo	0	638	No
SE267	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE268	Barneby reed-mustard	0	639	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	486	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	13	No
	Wright fishhook cactus	0	129	No
	Yellow-billed cuckoo	0	639	No
SE269	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	608	No
	Wright fishhook cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE270	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	487	No
	Yellow-billed cuckoo	0	639	No
SE271	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	603	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Wright fishhook cactus	0	576	No
	Yellow-billed cuckoo	0	639	No
SE272	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	179	No
	Wright fishhook cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE273	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	565	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	396	No
	Wright fishhook cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No
SE274	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	102	No
	Southwestern willow flycatcher	0	3	No
	Yellow-billed cuckoo	0	639	No
SE275	Mexican spotted owl	0	639	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	435	No
	Southwestern willow flycatcher	0	275	No
	Wright fishhook cactus	0	639	No
	Yellow-billed cuckoo	0	639	No
SE276	Barneby reed-mustard	0	373	No
	Mexican spotted owl	0	133	No
	Monarch butterfly	0	640	No
	San Rafael cactus	0	637	No
	Southwestern willow flycatcher	0	626	No
	Wright fishhook cactus	0	640	Yes
	Yellow-billed cuckoo	0	640	No
SE277	Barneby reed-mustard	0	655	No
	Last chance townsendia	0	655	Yes
	Mexican spotted owl	0	625	No
	Monarch butterfly	0	655	No
	San Rafael cactus	0	489	No
	Winkler cactus	0	490	No
	Yellow-billed cuckoo	0	655	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE278	Barneby reed-mustard	0	638	No
	Last chance townsendia	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	638	No
	Southwestern willow flycatcher	0	472	No
	Winkler cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
SE279A	Barneby reed-mustard	0	563	No
	Last chance townsendia	0	563	No
	Mexican spotted owl	0	433	No
	Monarch butterfly	0	563	No
	San Rafael cactus	0	563	No
	Winkler cactus	0	563	No
	Wright fishhook cactus	0	563	No
	Yellow-billed cuckoo	0	563	No
SE279B	Barneby reed-mustard	0	79	No
	Last chance townsendia	0	79	No
	Mexican spotted owl	0	63	No
	Monarch butterfly	0	79	No
	San Rafael cactus	0	79	No
	Winkler cactus	0	79	No
	Wright fishhook cactus	0	79	No
	Yellow-billed cuckoo	0	79	No
SE280A	Barneby reed-mustard	0	563	No
	Mexican spotted owl	0	563	No
	Monarch butterfly	0	563	No
	San Rafael cactus	0	563	No
	Winkler cactus	0	563	No
	Wright fishhook cactus	0	563	Yes
	Yellow-billed cuckoo	0	563	No
SE280B	Barneby reed-mustard	0	76	No
	Mexican spotted owl	0	76	No
	Monarch butterfly	0	76	No
	San Rafael cactus	0	76	No
	Winkler cactus	0	76	No
	Wright fishhook cactus	0	76	No
	Yellow-billed cuckoo	0	76	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE281	Barneby reed-mustard	0	651	Yes
	Mexican spotted owl	0	640	No
	Monarch butterfly	0	651	No
	San Rafael cactus	0	612	No
	Wright fishhook cactus	0	651	No
	Yellow-billed cuckoo	0	651	No
SE282	Barneby reed-mustard	0	638	No
	Mexican spotted owl	0	638	No
	Monarch butterfly	0	638	No
	San Rafael cactus	0	428	No
	Southwestern willow flycatcher	0	638	No
	Wright fishhook cactus	0	638	No
	Yellow-billed cuckoo	0	638	No
SE283A	Barneby reed-mustard	0	566	No
	Mexican spotted owl	0	566	No
	Monarch butterfly	0	566	No
	San Rafael cactus	0	566	No
	Southwestern willow flycatcher	0	14	No
	Winkler cactus	0	566	No
	Wright fishhook cactus	0	566	Yes
	Yellow-billed cuckoo	0	566	No
SE283B	Barneby reed-mustard	0	73	No
	Mexican spotted owl	0	73	No
	Monarch butterfly	0	73	No
	San Rafael cactus	0	73	No
	Southwestern willow flycatcher	0	8	No
	Winkler cactus	0	72	No
	Wright fishhook cactus	0	73	Yes
	Yellow-billed cuckoo	0	73	No
SE284A	Barneby reed-mustard	0	564	No
	Mexican spotted owl	0	562	No
	Monarch butterfly	0	564	No
	San Rafael cactus	0	564	No
	Southwestern willow flycatcher	0	88	No
	Wright fishhook cactus	0	564	Yes
	Yellow-billed cuckoo	0	564	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE284B	Barneby reed-mustard	0	75	No
	Mexican spotted owl	0	65	No
	Monarch butterfly	0	75	No
	San Rafael cactus	0	75	No
	Wright fishhook cactus	0	75	Yes
	Yellow-billed cuckoo	0	75	No
SE286	Barneby reed-mustard	0	639	No
	Mexican spotted owl	0	604	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Wright fishhook cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No
SE287A	Barneby reed-mustard	0	562	No
	Monarch butterfly	0	562	No
	San Rafael cactus	0	562	No
	Southwestern willow flycatcher	0	547	No
	Wright fishhook cactus	0	562	No
	Yellow-billed cuckoo	0	562	No
SE287B	Barneby reed-mustard	0	76	No
	Monarch butterfly	0	76	No
	San Rafael cactus	0	76	No
	Southwestern willow flycatcher	0	76	No
	Wright fishhook cactus	0	76	No
	Yellow-billed cuckoo	0	76	No
SE288A	Barneby reed-mustard	0	554	No
	Mexican spotted owl	0	52	No
	Monarch butterfly	0	554	No
	San Rafael cactus	0	554	No
	Southwestern willow flycatcher	0	493	No
	Wright fishhook cactus	0	554	No
	Yellow-billed cuckoo	0	554	No
SE288B	Barneby reed-mustard	0	85	No
	Monarch butterfly	0	85	No
	San Rafael cactus	0	85	No
	Southwestern willow flycatcher	0	68	No
	Wright fishhook cactus	0	85	No
	Yellow-billed cuckoo	0	85	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE289	Mexican spotted owl	0	582	No
	Monarch butterfly	0	670	No
	San Rafael cactus	0	649	No
	Wright fishhook cactus	0	670	Yes
	Yellow-billed cuckoo	0	670	No
SE290	Barneby reed-mustard	0	167	No
	Mexican spotted owl	0	583	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Wright fishhook cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No
SE291A	Barneby reed-mustard	0	119	No
	Mexican spotted owl	0	549	No
	Monarch butterfly	0	549	No
	San Rafael cactus	0	549	No
	Wright fishhook cactus	0	549	No
	Yellow-billed cuckoo	0	549	No
SE291B	Mexican spotted owl	0	90	No
	Monarch butterfly	0	90	No
	San Rafael cactus	0	90	No
	Wright fishhook cactus	0	90	No
	Yellow-billed cuckoo	0	90	No
SE292A	Monarch butterfly	0	541	No
	San Rafael cactus	0	297	No
	Wright fishhook cactus	0	541	Yes
	Yellow-billed cuckoo	0	541	No
SE292B	Monarch butterfly	0	100	No
	San Rafael cactus	0	57	No
	Wright fishhook cactus	0	100	Yes
	Yellow-billed cuckoo	0	100	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE293A	Last chance townsendia	0	558	No
	Mexican spotted owl	0	540	No
	Monarch butterfly	0	558	No
	San Rafael cactus	0	558	Yes
	Utah prairie dog	0	558	No
	Ute ladies'-tresses	0	148	No
	Winkler cactus	0	558	No
	Wright fishhook cactus	0	558	Yes
	Yellow-billed cuckoo	0	558	No
SE293B	Last chance townsendia	0	80	No
	Mexican spotted owl	0	30	No
	Monarch butterfly	0	80	No
	San Rafael cactus	0	80	Yes
	Utah prairie dog	0	80	No
	Ute ladies'-tresses	0	42	No
	Winkler cactus	0	80	No
	Wright fishhook cactus	0	80	Yes
	Yellow-billed cuckoo	0	80	No
SE294	Barneby reed-mustard	0	661	No
	Last chance townsendia	0	661	No
	Mexican spotted owl	0	120	No
	Monarch butterfly	0	661	No
	San Rafael cactus	0	661	No
	Southwestern willow flycatcher	0	62	No
	Winkler cactus	0	661	No
	Wright fishhook cactus	0	661	Yes
	Yellow-billed cuckoo	0	661	Yes
SE295	Barneby reed-mustard	0	49	No
	Last chance townsendia	0	639	No
	Mexican spotted owl	0	1	No
	Monarch butterfly	0	639	No
	San Rafael cactus	0	639	No
	Southwestern willow flycatcher	0	54	No
	Ute ladies'-tresses	0	0	No
	Winkler cactus	0	639	No
	Wright fishhook cactus	0	639	Yes
	Yellow-billed cuckoo	0	639	No

Parcel Number	Common Name	Critical Habitat Acres	Potential Range Acres	Elemental Occurrence (Yes/No)
SE296A	Last chance townsendia	0	557	No
	Mexican spotted owl	0	214	No
	Monarch butterfly	0	557	No
	San Rafael cactus	0	557	No
	Winkler cactus	0	557	No
	Wright fishhook cactus	0	557	No
	Yellow-billed cuckoo	0	557	No
SE296B	Last chance townsendia	0	82	No
	Monarch butterfly	0	82	No
	San Rafael cactus	0	82	No
	Winkler cactus	0	82	No
	Wright fishhook cactus	0	82	Yes
	Yellow-billed cuckoo	0	82	No
SE297A	Barneby reed-mustard	0	563	No
	Last chance townsendia	0	563	No
	Mexican spotted owl	0	563	No
	Monarch butterfly	0	563	No
	San Rafael cactus	0	563	No
	Southwestern willow flycatcher	0	412	No
	Winkler cactus	0	563	No
	Wright fishhook cactus	0	563	No
	Yellow-billed cuckoo	0	563	No
SE297B	Barneby reed-mustard	0	79	No
	Last chance townsendia	0	79	No
	Mexican spotted owl	0	79	No
	Monarch butterfly	0	79	No
	San Rafael cactus	0	79	No
	Southwestern willow flycatcher	0	79	No
	Winkler cactus	0	79	No
	Wright fishhook cactus	0	79	No
	Yellow-billed cuckoo	0	79	No

Appendix F BLM Visual Resource Inventory and Visual Resource Management Classes Tables and Mapset

September 2023

Table F-1. BLM VRI Class and Associated Inventory Components by Parcel for the All Parcels (in acres)

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
1	0	0	0	5836	0	0	5836	0	5836	0	1085	4750	0
2	0	0	0	3618	0	0	3622	0	3622	0	3622	0	0
2S	0	0	0	768	0	0	768	0	768	0	768	0	0
3	0	73	484	734	74	1217	0	0	1291	0	484	807	0
3C	0	325	0	0	325	0	0	325	0	0	325	0	0
3D	0	115	113	0	115	0	113	228	0	0	228	0	0
3E	0	91	0	0	91	0	0	91	0	0	91	0	0
3S	0	0	0	240	0	240	0	0	240	0	0	240	0
4	0	0	0	1215	0	0	1215	0	1215	0	810	405	0
5	0	0	0	2043	0	0	2043	0	2043	0	2043	0	0
5S	0	0	0	1904	0	0	1904	0	1904	0	1904	0	0
6	0	0	0	173	0	171	2	0	173	0	173	0	0
7A	0	446	0	0	446	0	0	446	0	0	446	0	0
7B	0	563	0	0	563	0	0	563	0	0	563	0	0
7C	0	216	161	0	216	0	162	377	0	0	377	0	0
8	0	0	929	0	0	929	0	0	929	0	929	0	0
9	0	0	0	443	0	0	443	0	0	443	443	0	0
10	0	0	0	321	0	0	321	0	0	321	321	0	0
11	0	0	0	1295	0	0	1295	0	0	1295	1295	0	0
12	0	0	0	644	0	0	644	0	0	644	644	0	0
13	0	0	0	324	0	0	324	0	0	324	324	0	0
15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
21	0	0	0	360	0	0	360	360	0	0	0	360	0
23	0	91	304	248	0	120	523	367	277	0	643	0	0
24	0	0	0	895	0	0	895	0	895	0	895	0	0
25	0	0	709	134	0	708	134	0	843	0	843	0	0
26	0	0	823	0	0	827	0	0	893	0	893	0	0
27	0	0	105	16	0	105	16	0	121	0	121	0	0
28	0	0	724	4196	0	0	4920	723	4197	0	4920	0	0
29	0	0	0	241	0	0	241	0	241	0	241	0	0
30	0	0	353	285	0	0	638	353	0	285	638	0	0
32	0	8	592	566	0	598	568	9	1157	0	1166	0	0
33	0	0	0	0	0	0	0	329	0	0	329	0	0
34	0	1058	0	0	1058	0	0	1058	0	0	1058	0	0
35	0	0	0	2392	0	0	2392	0	1839	553	2392	0	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
35M	0	0	0	371	0	0	371	0	352	19	371	0	0
36	0	0	2068	2052	0	4122	0	238	2073	1809	3640	482	0
37	0	0	0	639	0	639	0	0	0	639	639	0	0
38	0	0	797	17189	0	1823	16164	0	3325	14661	17986	0	0
38M	0	0	225	139	0	249	115	0	316	48	364	0	0
38S	0	0	0	682	0	0	682	0	91	591	682	0	0
39	0	0	0	2973	0	654	2318	0	0	2973	2973	0	0
39S	0	0	0	655	0	91	565	0	0	655	655	0	0
40	0	0	0	1336	0	1275	61	0	0	1336	1336	0	0
41	0	0	0	2692	0	2692	0	0	0	2692	2692	0	0
42	0	2685	0	230	0	2685	230	2685	0	230	2916	0	0
43	0	1121	0	0	0	1121	0	1121	0	0	1121	0	0
44	0	205	96	0	0	301	0	205	96	0	301	0	0
46	0	1074	207	0	1075	0	207	1281	0	0	568	713	0
46C	0	119	0	0	119	0	0	119	0	0	40	78	0
47	3	756	115	0	760	0	115	874	0	0	874	0	0
48	2	1893	0	0	1895	0	0	1895	0	0	875	1020	0
49	0	0	1279	0	0	1279	0	0	1279	0	1279	0	0
50	0	0	895	0	0	897	0	0	897	0	897	0	0
51M	0	0	0	481	0	0	481	0	272	209	481	0	0
52M	0	0	0	3215	0	0	3215	0	2308	907	3215	0	0
53	0	0	0	1615	0	263	1352	0	0	1615	1615	0	0
53M	0	0	0	395	0	0	395	0	0	395	395	0	0
53OG	0	0	0	481	0	0	481	0	0	481	481	0	0
54	0	0	0	5756	0	0	5756	0	0	5756	1952	3805	0
SE101	0	22	122	14	0	145	13	22	136	0	158	0	0
SE102	0	639	0	0	237	402	0	639	0	0	639	0	0
SE103	0	630	0	0	253	377	0	630	0	0	630	0	0
SE104	0	726	0	0	728	0	0	728	0	0	726	2	0
SE105	0	538	0	0	400	141	0	666	0	0	666	0	0
SE106	0	634	0	0	0	636	0	636	0	0	636	0	0
SE107	0	0	0	199	0	0	199	0	199	0	199	0	0
SE108	0	0	113	0	0	80	0	0	80	0	80	0	0
SE109	0	0	616	0	0	320	0	0	320	0	320	0	0
SE110	0	0	89	31	0	89	31	0	120	0	120	0	0
SE111	0	0	0	643	0	0	643	0	643	0	643	0	0
SE112	637	0	0	0	0	637	0	637	0	0	0	637	0
SE113	635	0	0	0	0	635	0	635	0	0	0	635	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE114	635	0	0	0	0	635	0	635	0	0	0	635	0
SE115	619	0	0	0	619	0	0	619	0	0	0	619	0
SE116	4	0	76	0	0	80	0	80	0	0	0	80	0
SE117	0	0	80	0	0	80	0	80	0	0	0	80	0
SE118	639	0	0	0	0	639	0	639	0	0	0	639	0
SE119	639	0	0	0	566	74	0	639	0	0	0	0	639
SE120	320	0	0	0	320	0	0	320	0	0	0	0	320
SE121	640	0	0	0	640	0	0	640	0	0	0	0	640
SE122	647	0	0	0	0	647	0	647	0	0	0	647	0
SE123	5	635	0	0	639	0	0	639	0	0	0	639	0
SE124	639	0	0	0	43	596	0	639	0	0	639	0	0
SE125	0	640	0	0	640	0	0	640	0	0	0	640	0
SE126	638	0	0	0	0	638	0	638	0	0	0	634	4
SE127	15	105	0	0	120	0	0	120	0	0	0	120	0
SE128	1	638	0	0	638	0	0	638	0	0	0	638	0
SE129	12	308	0	0	320	0	0	320	0	0	0	320	0
SE130	5	630	0	0	246	389	0	635	0	0	0	635	0
SE131	639	0	0	0	118	522	0	639	0	0	562	77	0
SE132	639	0	0	0	0	639	0	639	0	0	639	0	0
SE133	638	0	0	0	0	638	0	638	0	0	0	638	0
SE134	0	640	0	0	640	0	0	640	0	0	0	640	0
SE135A	0	40	0	0	40	0	0	40	0	0	0	40	0
SE135B	0	40	0	0	40	0	0	40	0	0	0	40	0
SE136	0	638	0	0	638	0	0	638	0	0	0	638	0
SE137	77	0	0	0	0	77	0	77	0	0	0	77	0
SE138	639	0	0	0	149	490	0	639	0	0	0	639	0
SE139	160	0	0	0	160	0	0	160	0	0	0	160	0
SE140	775	0	0	0	0	775	0	775	0	0	0	775	0
SE141	641	0	0	0	0	641	0	641	0	0	179	462	0
SE142	9	428	204	0	0	436	205	641	0	0	641	0	0
SE143	640	0	0	0	0	640	0	640	0	0	0	640	0
SE144	457	0	0	0	457	0	0	457	0	0	0	457	0
SE145	641	0	0	0	0	641	0	641	0	0	0	641	0
SE146	641	0	0	0	0	641	0	641	0	0	0	641	0
SE147	654	0	0	0	0	654	0	654	0	0	0	654	0
SE148	4	469	166	0	0	473	167	639	0	0	639	0	0
SE149	36	52	0	0	0	88	0	88	0	0	0	88	0
SE150A	0	64	0	564	0	43	584	628	0	0	628	0	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE150B	0	0	0	1	0	1	0	0	1	0	0	1	0
SE151	0	0	0	636	0	31	605	636	0	0	636	0	0
SE152	0	152	0	480	122	510	0	631	0	0	631	0	0
SE153	0	10	31	616	9	152	496	657	0	0	657	0	0
SE154	639	0	0	0	639	0	0	639	0	0	639	0	0
SE155	120	0	0	0	120	0	0	120	0	0	80	40	0
SE156	0	596	0	0	596	0	0	596	0	0	596	0	0
SE157A	0	0	611	0	0	0	614	614	0	0	614	0	0
SE157B	0	0	13	12	0	0	25	14	0	12	25	0	0
SE158A	1	0	610	0	0	0	613	613	0	0	613	0	0
SE158B	0	26	0	0	0	26	0	26	0	0	26	0	0
SE159	4	36	0	0	40	0	0	40	0	0	40	0	0
SE160A	0	0	49	105	0	0	153	153	0	0	49	105	0
SE160B	0	0	6	0	0	6	0	6	0	0	0	6	0
SE161	0	0	0	680	0	0	680	0	680	0	680	0	0
SE162	0	642	0	0	96	546	0	642	0	0	642	0	0
SE163	0	399	0	0	0	399	0	399	0	0	399	0	0
SE164	0	80	0	0	0	80	0	80	0	0	80	0	0
SE165	0	635	0	0	0	635	0	635	0	0	635	0	0
SE166	0	80	0	0	0	80	0	80	0	0	80	0	0
SE167	0	639	0	0	0	639	0	639	0	0	639	0	0
SE168	0	638	0	0	0	638	0	638	0	0	638	0	0
SE169	2	635	0	0	0	637	0	637	0	0	637	0	0
SE170	0	601	174	0	0	775	0	601	174	0	775	0	0
SE171	0	51	348	0	0	399	0	51	348	0	399	0	0
SE172	4	635	0	0	639	0	0	639	0	0	639	0	0
SE173	0	693	0	0	0	693	0	693	0	0	693	0	0
SE174	5	632	0	0	636	0	0	636	0	0	636	0	0
SE175	639	0	0	0	639	0	0	639	0	0	576	63	0
SE176	319	0	0	0	319	0	0	319	0	0	319	0	0
SE177	6	688	0	0	0	694	0	694	0	0	694	0	0
SE178	0	639	0	0	612	27	0	639	0	0	639	0	0
SE179	10	629	0	0	1	638	0	639	0	0	639	0	0
SE180	7	635	0	0	0	641	0	641	0	0	641	0	0
SE181	640	0	0	0	7	633	0	640	0	0	640	0	0
SE182	637	0	0	0	0	637	0	637	0	0	637	0	0
SE183	638	0	0	0	0	638	0	638	0	0	638	0	0
SE184	7	459	175	0	0	465	175	640	0	0	640	0	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE185	320	0	0	0	210	111	0	320	0	0	320	0	0
SE186	370	0	0	0	0	370	0	370	0	0	370	0	0
SE187	640	0	0	0	640	0	0	640	0	0	0	640	0
SE188	871	0	0	0	871	0	0	871	0	0	871	0	0
SE189	639	0	0	0	639	0	0	639	0	0	0	639	0
SE190	639	0	0	0	639	0	0	639	0	0	0	639	0
SE191	1	638	0	0	207	432	0	639	0	0	599	40	0
SE192	5	862	0	0	54	813	0	867	0	0	867	0	0
SE193	0	639	0	0	0	639	0	639	0	0	639	0	0
SE194	0	639	0	0	0	639	0	639	0	0	639	0	0
SE195	0	639	0	0	0	639	0	639	0	0	639	0	0
SE196	0	639	0	0	0	639	0	639	0	0	639	0	0
SE197	0	413	0	0	0	413	0	413	0	0	413	0	0
SE198	0	639	0	0	0	639	0	639	0	0	639	0	0
SE199	0	658	0	0	0	658	0	658	0	0	658	0	0
SE200	6	632	0	0	0	638	0	638	0	0	638	0	0
SE201	639	0	0	0	639	0	0	639	0	0	415	224	0
SE202	8	631	0	0	467	172	0	640	0	0	640	0	0
SE203A	0	511	0	0	511	0	0	511	0	0	511	0	0
SE203B	0	127	0	0	127	0	0	127	0	0	127	0	0
SE204	1	638	0	0	554	84	0	639	0	0	639	0	0
SE205	639	0	0	0	639	0	0	639	0	0	639	0	0
SE206A	6	537	0	0	543	0	0	543	0	0	543	0	0
SE206B	0	98	0	0	98	0	0	98	0	0	98	0	0
SE207	0	621	18	0	0	620	18	639	0	0	639	0	0
SE208	0	639	0	0	0	639	0	639	0	0	639	0	0
SE209	0	639	0	0	0	639	0	639	0	0	639	0	0
SE210	0	6	633	0	0	7	632	639	0	0	639	0	0
SE211	0	293	346	0	0	292	346	639	0	0	639	0	0
SE212	0	639	0	0	0	639	0	639	0	0	639	0	0
SE213A	0	416	180	0	0	416	180	596	0	0	596	0	0
SE213B	0	0	43	0	0	0	43	43	0	0	43	0	0
SE214	0	348	70	0	0	348	70	418	0	0	418	0	0
SE215	4	110	525	0	0	113	526	639	0	0	639	0	0
SE216A	2	498	0	0	0	500	0	500	0	0	500	0	0
SE216B	0	2	0	0	0	2	0	2	0	0	2	0	0
SE216C	0	155	0	0	0	155	0	155	0	0	155	0	0
SE217	3	634	0	0	0	638	0	638	0	0	638	0	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE218	1	448	191	0	0	448	192	640	0	0	640	0	0
SE219	0	643	0	0	0	643	0	643	0	0	643	0	0
SE220	0	628	12	0	0	636	3	640	0	0	631	8	0
SE221	0	326	313	0	51	588	0	639	0	0	295	344	0
SE222	0	639	0	0	639	0	0	639	0	0	639	0	0
SE223	0	386	0	0	386	0	0	386	0	0	386	0	0
SE224A	5	599	0	0	604	0	0	604	0	0	604	0	0
SE224B	0	36	0	0	36	0	0	36	0	0	36	0	0
SE225	3	635	0	0	638	0	0	638	0	0	638	0	0
SE226	0	639	0	0	638	0	0	639	0	0	639	0	0
SE227	0	638	0	0	0	638	0	638	0	0	638	0	0
SE228	0	639	0	0	0	639	0	639	0	0	639	0	0
SE229	0	639	0	0	25	615	0	639	0	0	639	0	0
SE230	0	640	0	0	0	640	0	640	0	0	640	0	0
SE231	0	639	0	0	0	639	0	639	0	0	639	0	0
SE232	0	0	639	0	0	1	638	639	0	0	639	0	0
SE233	0	0	639	0	0	0	639	639	0	0	639	0	0
SE234	0	639	0	0	0	639	0	639	0	0	639	0	0
SE235	0	639	0	0	0	639	0	639	0	0	639	0	0
SE236	639	0	0	0	0	639	0	639	0	0	639	0	0
SE237	0	0	639	0	0	382	257	639	0	0	264	375	0
SE238	2	372	43	0	0	417	0	417	0	0	372	45	0
SE239	639	0	0	0	479	160	0	639	0	0	415	224	0
SE240	1	637	0	0	0	638	0	638	0	0	638	0	0
SE241	640	0	0	0	0	640	0	640	0	0	640	0	0
SE242	637	0	0	0	637	0	0	637	0	0	637	0	0
SE243	0	639	0	0	639	0	0	639	0	0	639	0	0
SE244	8	631	0	0	590	50	0	639	0	0	639	0	0
SE245	8	631	0	0	639	0	0	639	0	0	639	0	0
SE246	0	519	0	0	43	477	0	519	0	0	519	0	0
SE247	0	877	0	0	0	877	0	877	0	0	877	0	0
SE248	0	639	0	0	504	135	0	639	0	0	639	0	0
SE249	0	639	0	0	520	119	0	639	0	0	639	0	0
SE250	0	639	0	0	0	639	0	639	0	0	639	0	0
SE251	0	878	0	0	0	878	0	878	0	0	878	0	0
SE252	0	639	0	0	0	639	0	639	0	0	639	0	0
SE253	0	639	0	0	0	639	0	639	0	0	639	0	0
SE254	0	639	0	0	0	639	0	639	0	0	639	0	0

Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE255	0	879	0	0	0	879	0	879	0	0	879	0	0
SE256	0	639	0	0	0	639	0	639	0	0	639	0	0
SE257	0	639	0	0	0	639	0	639	0	0	639	0	0
SE258	9	630	0	0	638	1	0	639	0	0	639	0	0
SE259	830	0	0	0	317	513	0	830	0	0	484	346	0
SE260	7	360	273	0	321	318	0	640	0	0	271	369	0
SE261	639	0	0	0	639	0	0	639	0	0	639	0	0
SE262	3	636	0	0	521	118	0	639	0	0	639	0	0
SE263	12	627	0	0	639	0	0	639	0	0	639	0	0
SE264	0	2	637	0	2	0	637	639	0	0	639	0	0
SE265	4	636	0	0	130	510	0	639	0	0	639	0	0
SE266	0	638	0	0	212	426	0	638	0	0	638	0	0
SE267	0	639	0	0	639	0	0	639	0	0	639	0	0
SE268	639	0	0	0	0	639	0	639	0	0	639	0	0
SE269	4	635	0	0	635	4	0	639	0	0	639	0	0
SE270	0	347	292	0	0	639	0	639	0	0	347	292	0
SE271	0	639	0	0	47	592	0	639	0	0	639	0	0
SE272	10	630	0	0	639	0	0	639	0	0	639	0	0
SE273	10	629	0	0	605	34	0	639	0	0	639	0	0
SE274	2	636	0	0	639	0	0	639	0	0	639	0	0
SE275	639	0	0	0	639	0	0	639	0	0	639	0	0
SE276	4	497	139	0	287	215	138	640	0	0	640	0	0
SE277	0	533	122	0	531	0	124	655	0	0	655	0	0
SE278	0	0	638	0	0	0	638	638	0	0	638	0	0
SE279A	0	0	144	419	0	144	419	563	0	0	0	563	0
SE279B	0	0	0	79	0	5	74	0	0	79	79	0	0
SE280A	0	342	220	1	17	546	0	562	0	0	342	221	0
SE280B	0	0	0	75	0	76	0	0	0	75	0	76	0
SE281	5	646	0	0	306	346	0	651	0	0	651	0	0
SE282	7	631	0	0	619	19	0	638	0	0	638	0	0
SE283A	0	566	0	0	0	566	0	566	0	0	566	0	0
SE283B	0	0	0	68	0	73	0	0	0	73	0	73	0
SE284A	0	558	7	0	0	564	0	564	0	0	557	7	0
SE284B	0	0	0	75	0	75	0	0	0	75	0	75	0
SE285	4	653	0	0	2	654	0	656	0	0	656	0	0
SE286	3	637	0	0	0	639	0	639	0	0	639	0	0
SE287A	0	562	0	0	0	562	0	562	0	0	562	0	0
SE287B	0	0	0	76	0	76	0	0	0	76	0	76	0

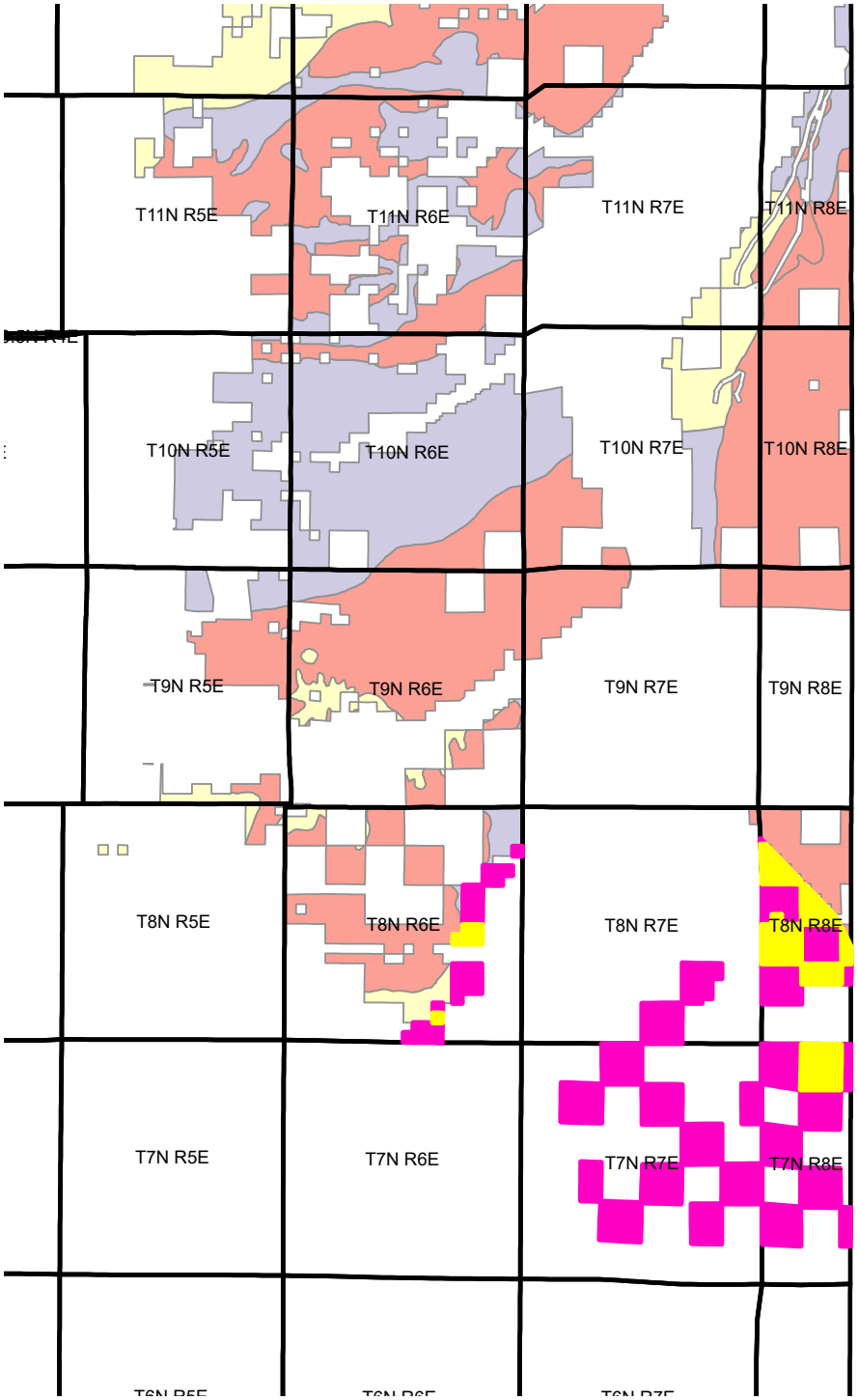
Parcel Number	VRI Class I	VRI Class II	VRI Class III	VRI Class IV	Scenic Quality A	Scenic Quality B	Scenic Quality C	Sensitivity Level High	Sensitivity Level Moderate	Sensitivity Level Low	Visual Distance Zone F/M	Visual Distance Zone Background	Visual Distance Zone Seldom Seen
SE288A	0	0	0	553	0	554	0	554	0	0	554	0	0
SE288B	0	0	0	82	0	85	0	0	0	85	0	85	0
SE289	0	0	670	0	0	0	670	670	0	0	670	0	0
SE290	0	639	0	0	639	0	0	639	0	0	639	0	0
SE291A	0	539	0	10	0	549	0	549	0	0	549	0	0
SE291B	0	0	0	90	0	90	0	0	0	90	90	0	0
SE292A	0	0	350	191	0	0	541	541	0	0	541	0	0
SE292B	0	0	0	96	0	0	100	0	83	17	100	0	0
SE293A	0	0	556	0	0	340	218	558	0	0	0	558	0
SE293B	0	0	77	0	0	0	80	80	0	0	80	0	0
SE294	0	661	0	0	73	588	0	661	0	0	661	0	0
SE295	0	639	0	0	0	639	0	639	0	0	639	0	0
SE296A	0	0	119	436	0	557	0	557	0	0	0	557	0
SE296B	0	0	0	80	0	82	0	0	0	82	82	0	0
SE297A	0	0	563	0	0	563	0	563	0	0	0	563	0
SE297B	0	0	0	79	0	79	0	0	0	79	79	0	0

Table F-2. BLM VRM Class for all BLM Parcels (in acres)

Parcel Number	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
1	0	0	1555	4281
2	0	0	1566	2056
2S	0	0	750	18
3	0	485	565	240
3D	0	0	5	0
3S	0	33	110	97
4	0	0	1215	0
5	0	0	2017	26
5S	0	0	1627	277
6	0	0	0	173
7C	0	1	0	0
8	0	0	929	0
9	0	0	0	443
10	0	0	0	321
11	0	0	0	1295
12	0	0	0	644
13	0	0	0	324
15	0	0	0	52
17	0	0	0	260
20	0	0	0	395
21	0	0	359	0
23	0	0	594	40
24	0	0	11	845
25	0	0	221	579
26	0	0	882	0
27	0	0	117	0
28	0	0	4911	0
29	0	0	239	0
30	0	0	633	0
32	0	40	1125	0
33	0	0	0	321
34	0	0	0	1058
35	0	0	993	1398
35M	0	0	0	288
36	0	1303	533	2120
37	0	575	0	64
38	0	648	8334	8979
38M	0	0	362	0

Parcel Number	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
38S	0	0	399	283
39	0	118	1474	1381
39S	0	0	655	0
40	0	0	0	1336
41	0	0	0	2679
42	0	0	2279	637
43	0	0	213	908
44	0	0	301	0
46	0	1255	0	0
46C	0	6	0	0
47	3	872	0	0
48	3	1891	0	0
49	0	0	0	1279
50	0	0	890	1
53	0	0	674	942
53M	0	0	0	33
53OG	0	0	0	0
54	0	0	5756	0

Visual Resource Management Class Map



Parcel on Current Page	2S	4
1	3	5
2	3S	5S

Visual Resource Management Class

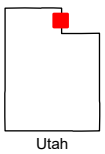
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

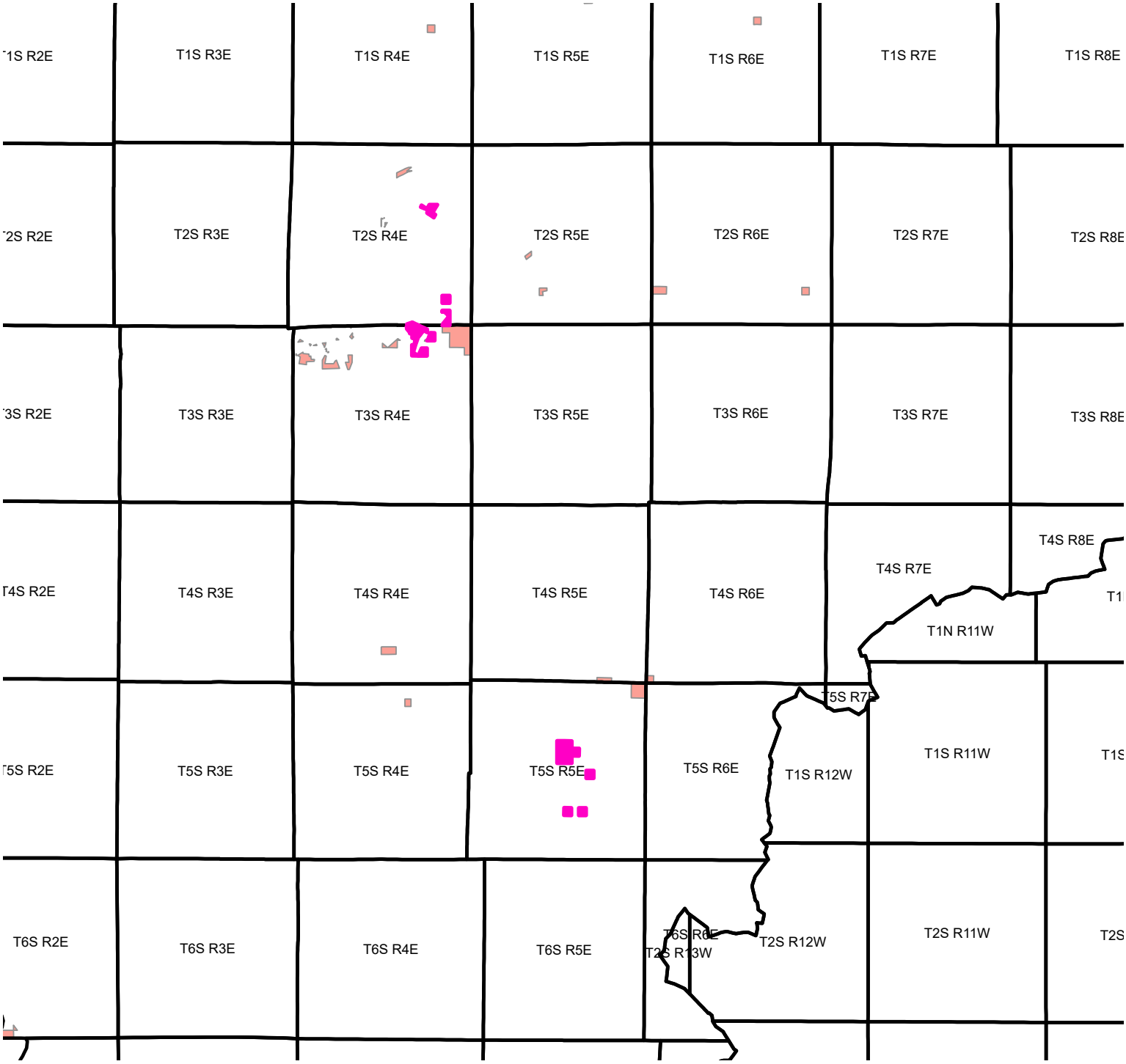
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Visual Resource Management Class Map



Parcel on Current Page
15
17
20

Visual Resource Management Class

- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

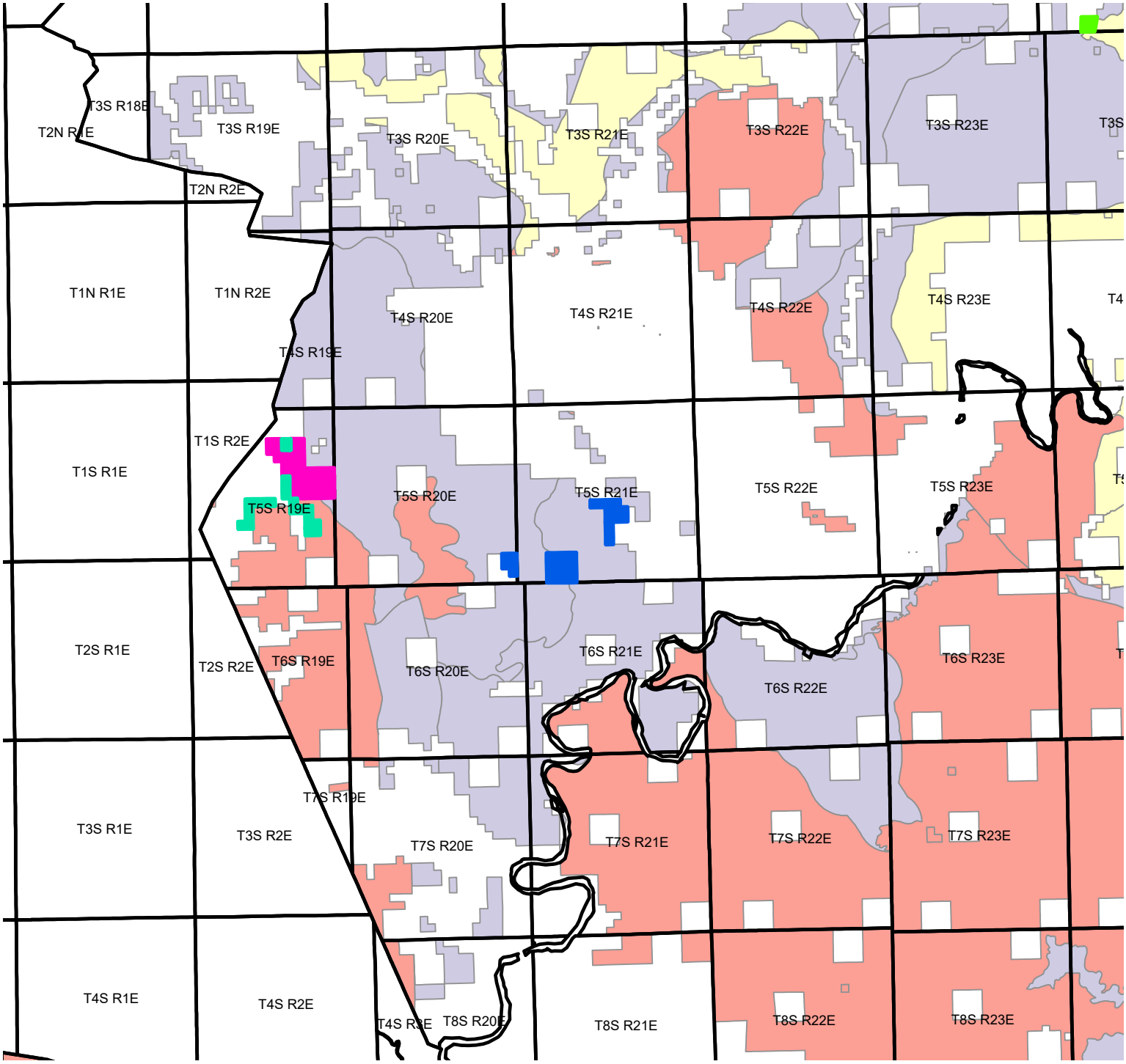
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	53OG	SE108	SE111
53	SE101	SE109	
53M	SE107	SE110	

Visual Resource Management Class

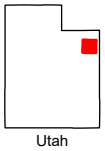
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

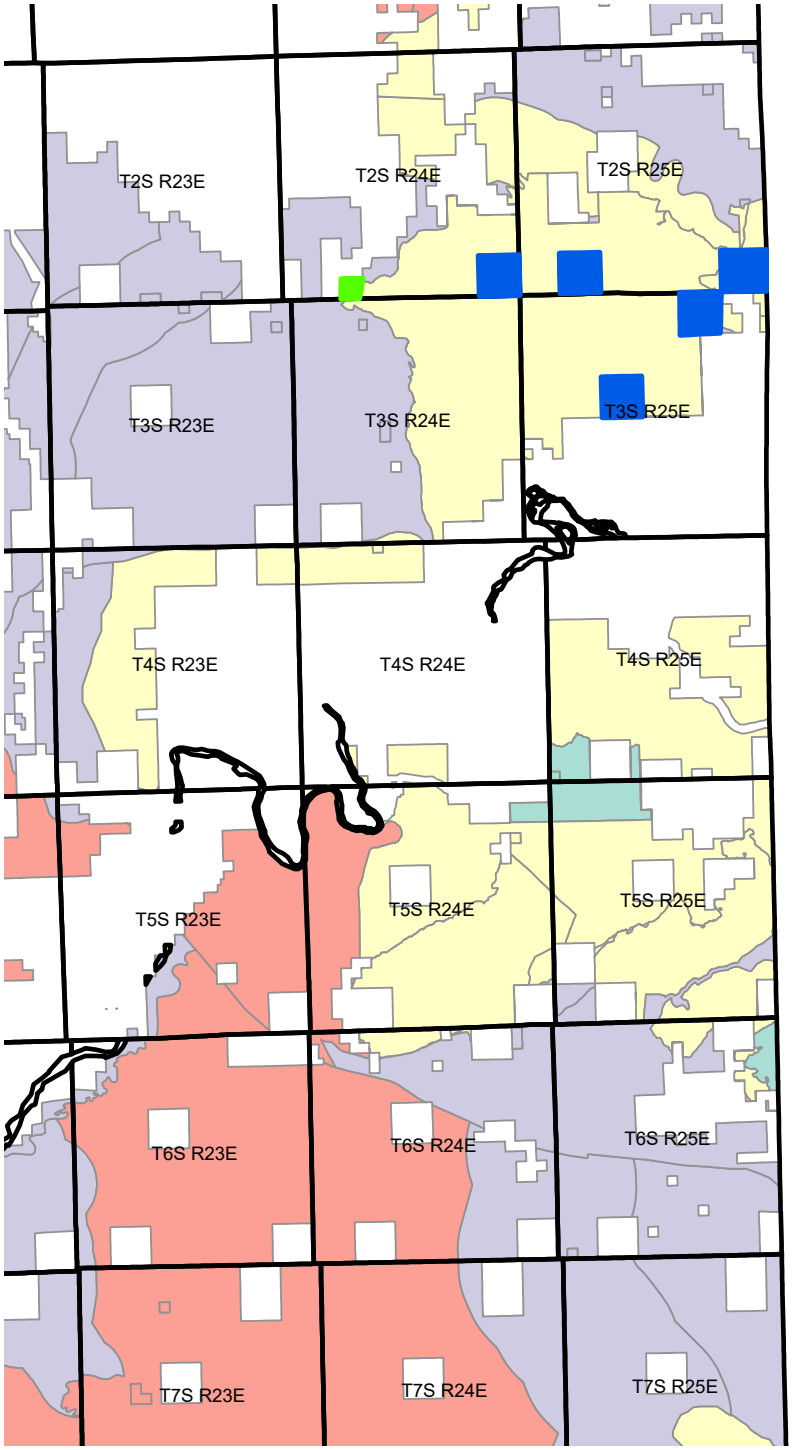
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Visual Resource Management Class Map



Parcel on Current Page	SE103	SE106
SE101	SE104	
SE102	SE105	

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

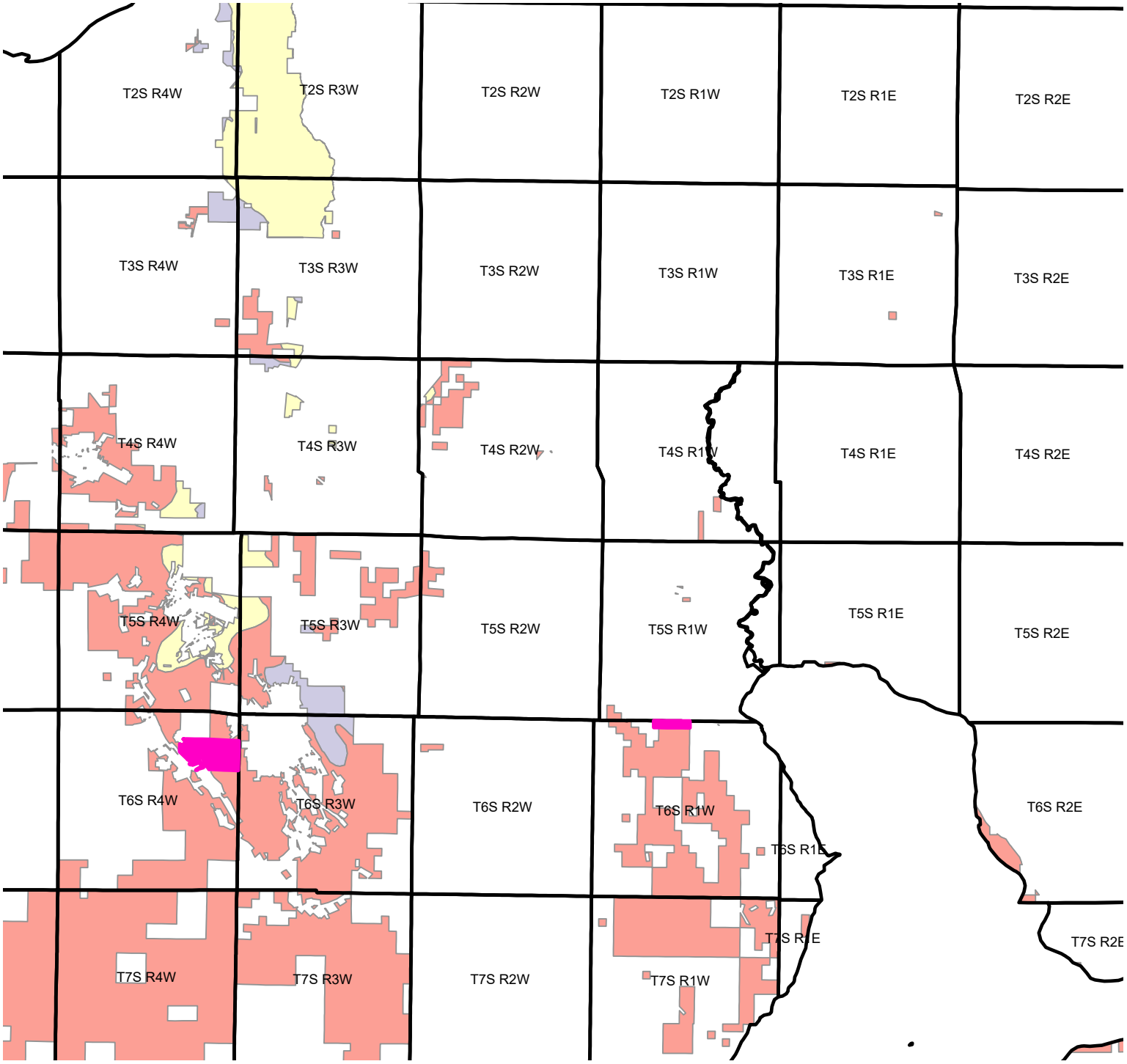
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No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page
34
6

Visual Resource Management Class

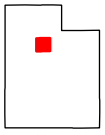
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

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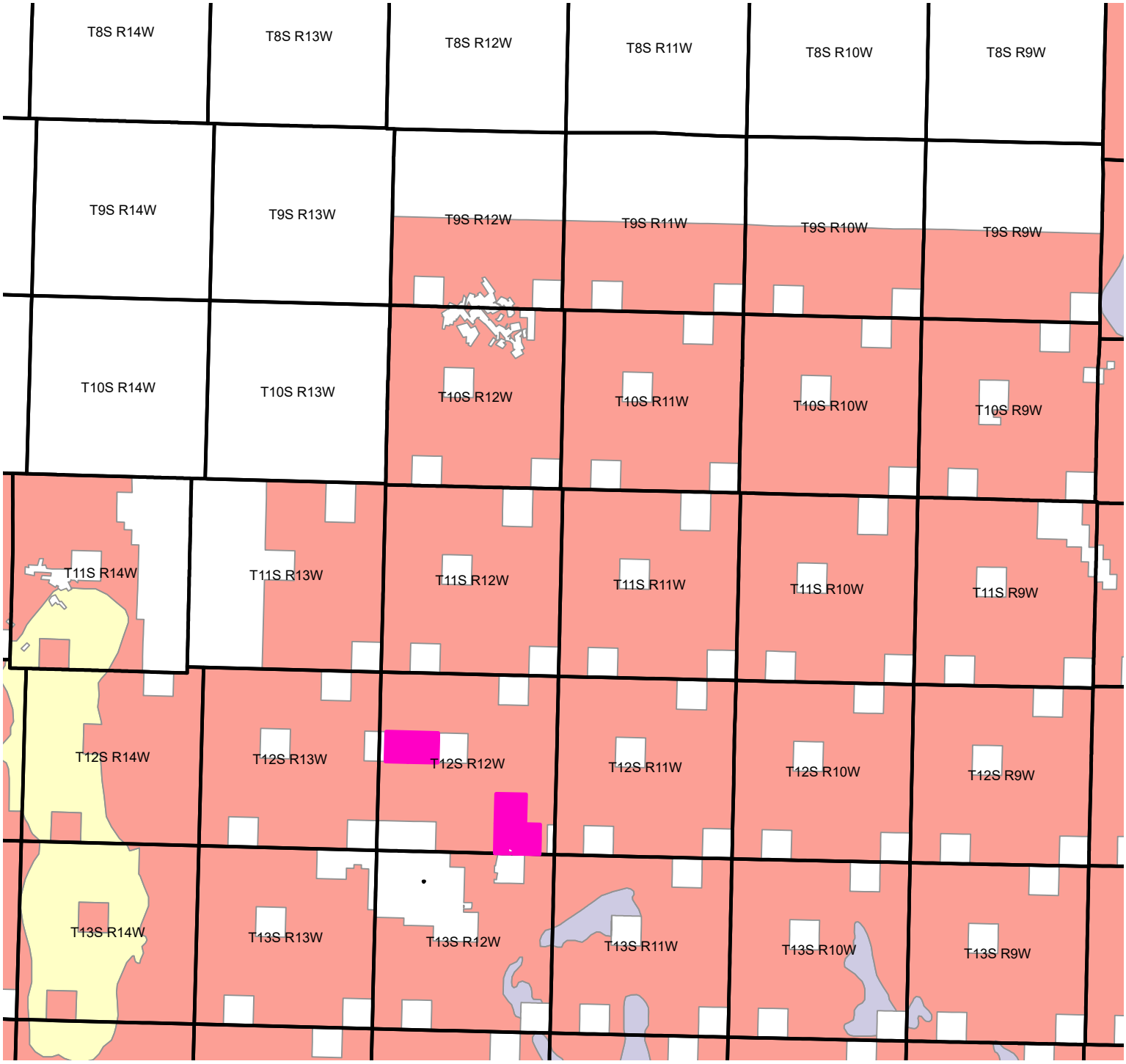




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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page
41

Visual Resource Management Class
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

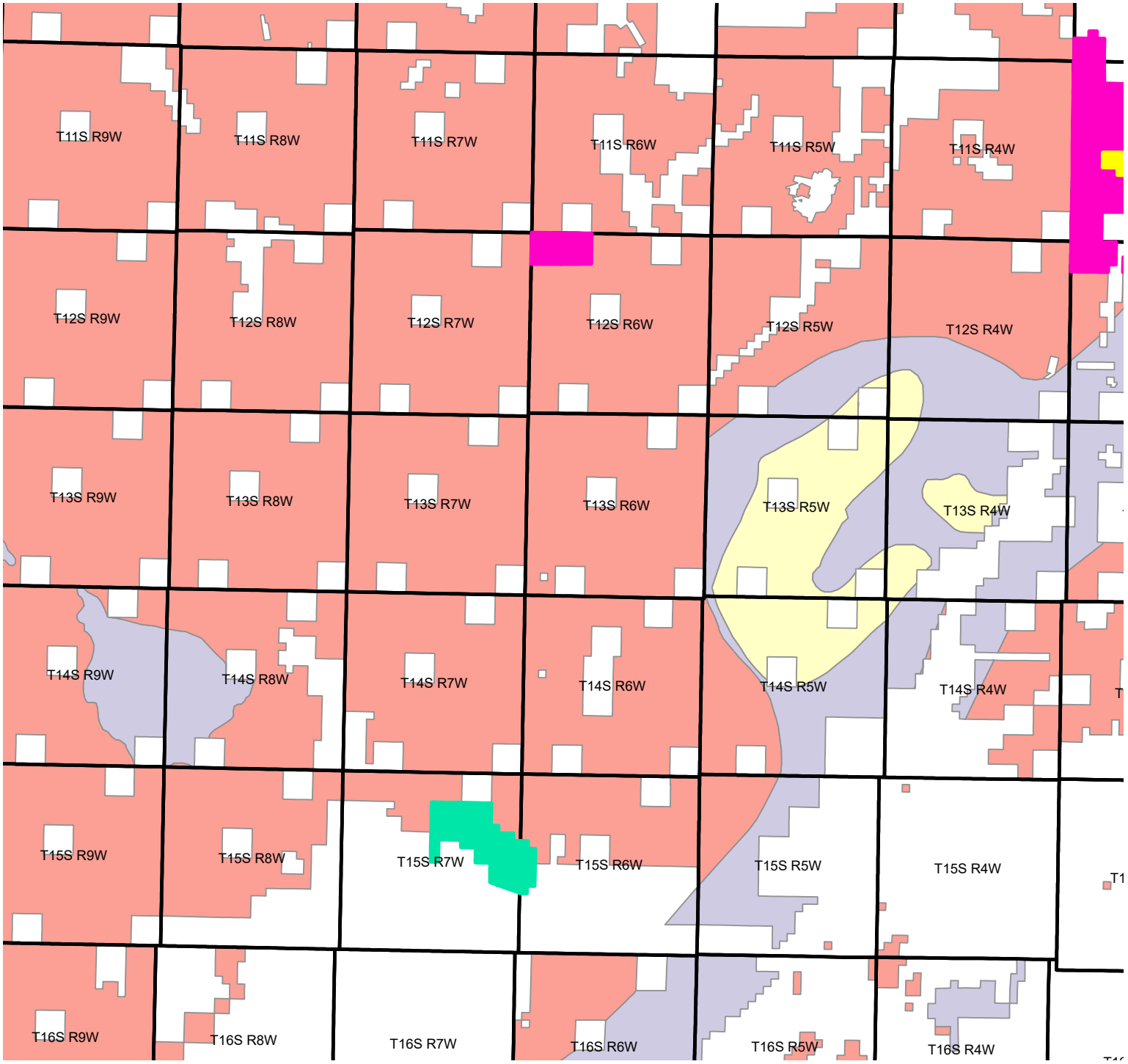
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	38S	51M
35	39	52M
38	40	

Visual Resource Management Class

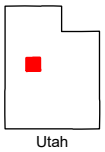
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

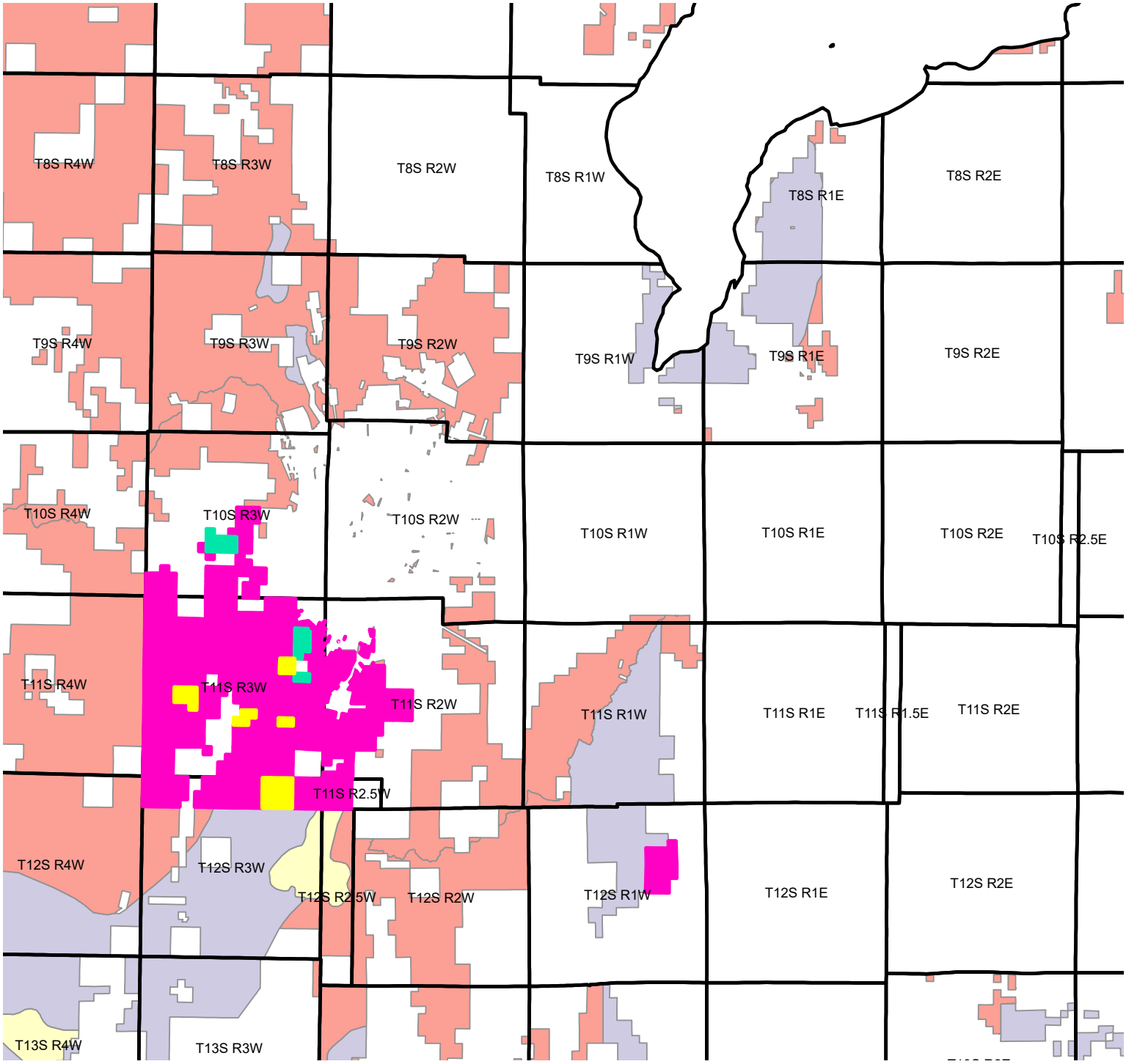
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	36	38M	39S
35	37	38S	8
35M	38	39	

Visual Resource Management Class

- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

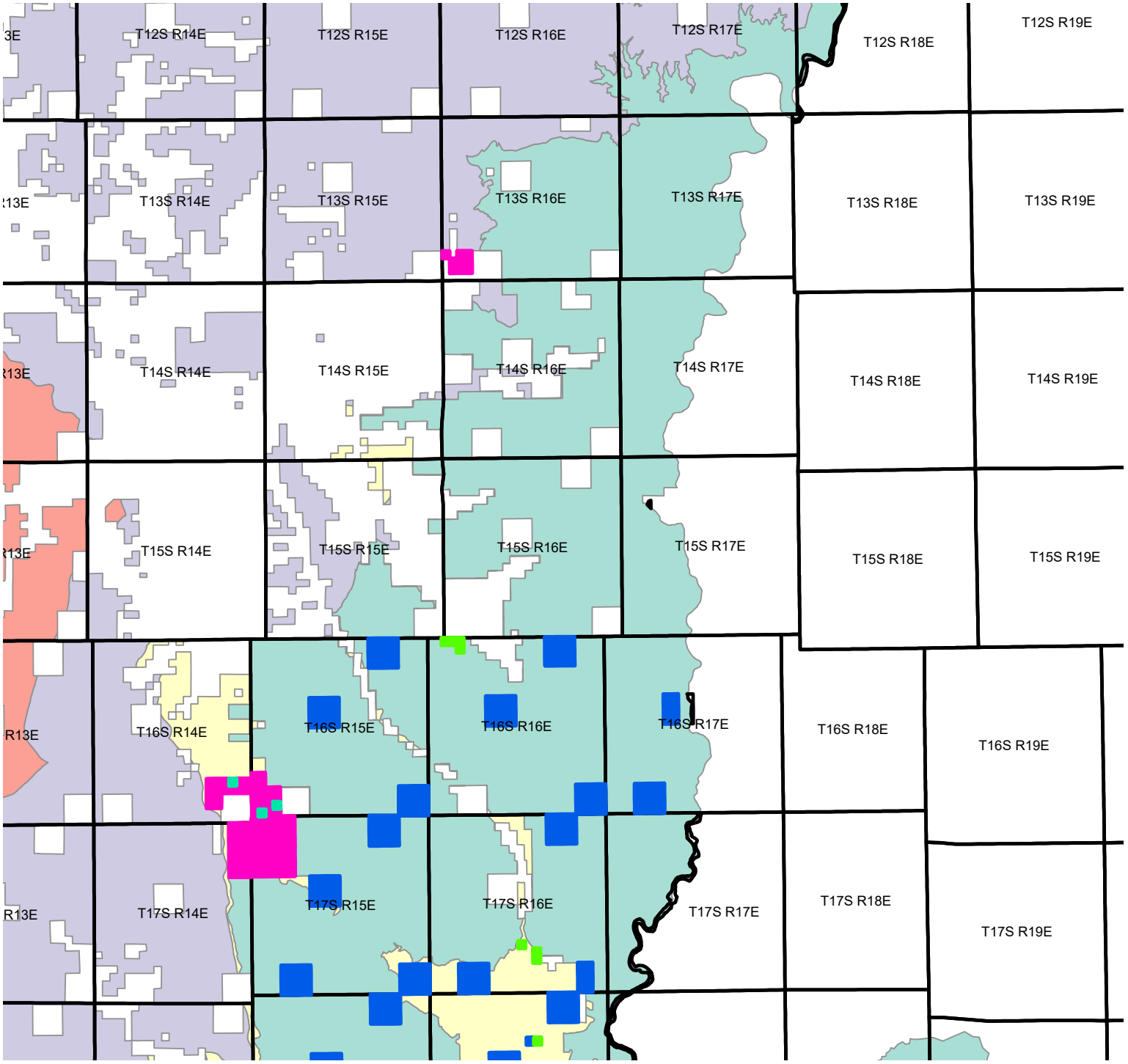
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	48	SE116	SE121	SE126	SE131
21	SE112	SE117	SE122	SE127	SE134
46	SE113	SE118	SE123	SE128	SE135A
46C	SE114	SE119	SE124	SE129	SE135B
47	SE115	SE120	SE125	SE130	SE136

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
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- Equalization parcel

0 1 2 4 Miles

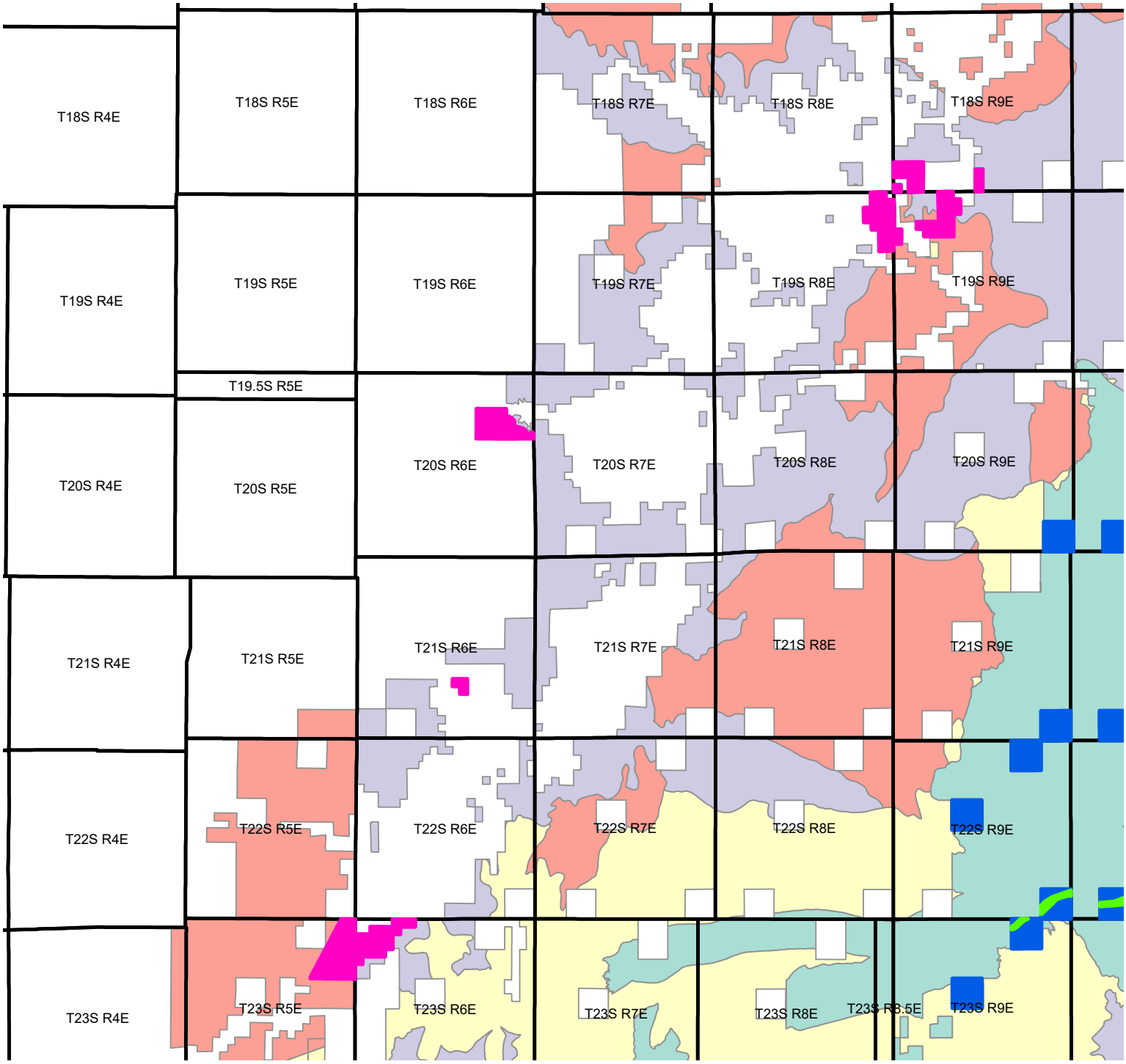
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page					
23	26	SE172	SE201	SE206A	SE225
24	27	SE175	SE202	SE206B	
25	49	SE187	SE203A	SE224A	
	50	SE190	SE203B	SE224B	

Visual Resource Management Class

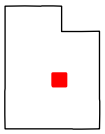
- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

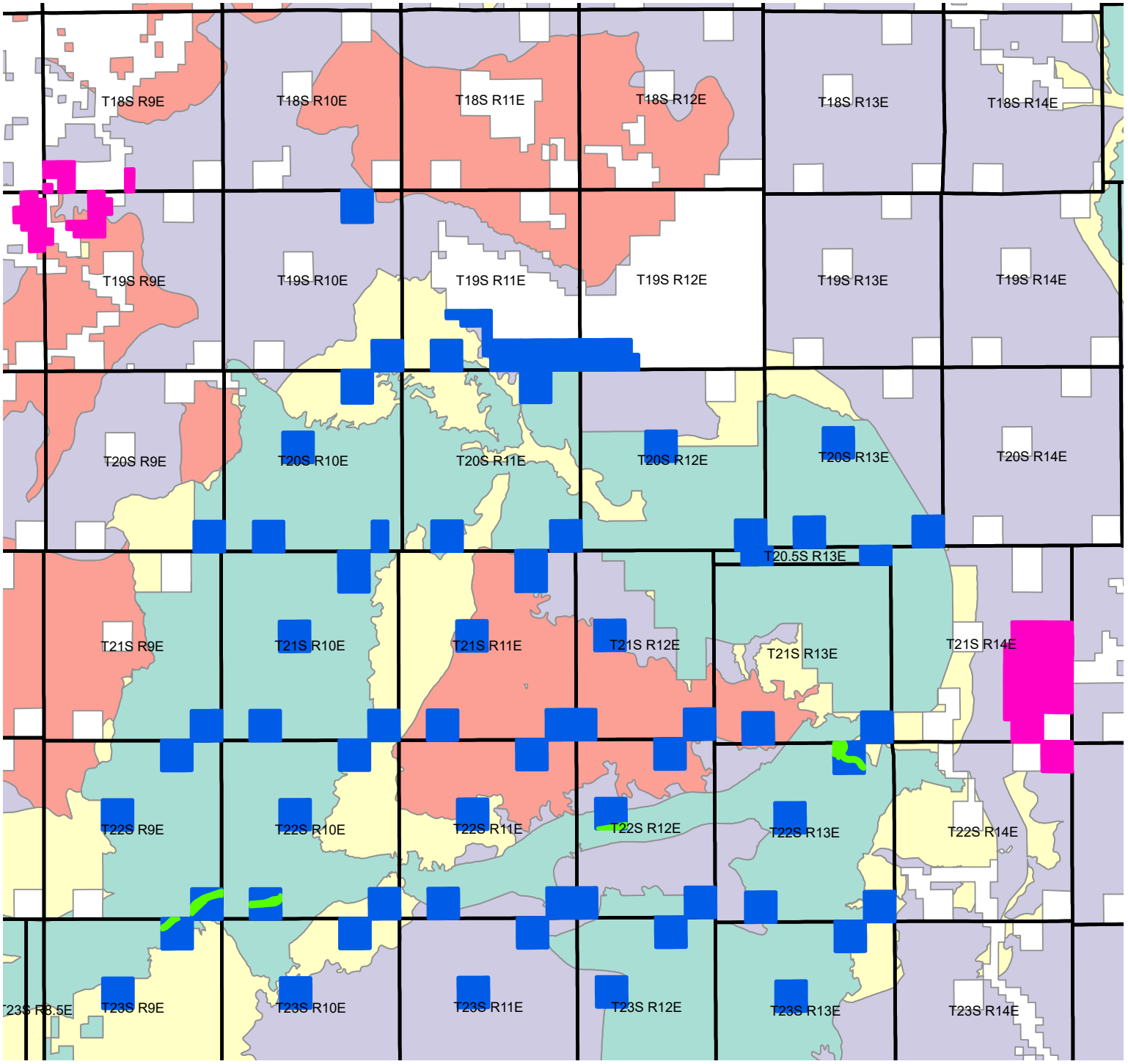
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page											
23	SE161	SE162	SE163	SE164	SE165	SE166	SE167	SE168	SE169	SE170	SE171
24	SE172	SE173	SE174	SE175	SE176	SE177	SE178	SE179	SE180	SE181	SE182
25	SE183	SE184	SE185	SE186	SE187	SE188	SE189	SE190	SE191	SE192	SE193
28	SE194	SE195	SE196	SE197	SE198	SE199	SE200	SE201	SE202	SE203A	SE203B
30	SE204	SE205	SE206A	SE206B	SE207	SE208	SE209	SE210	SE211	SE212	SE213A
SE161	SE213B	SE214	SE215	SE216A	SE216B	SE216C	SE217	SE218	SE219	SE224A	SE224B
	SE225	SE228	SE229	SE232	SE233	SE236	SE237	SE240	SE241		

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

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- BLM parcel conveyed to SITLA (minerals)
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- Equalization parcel

0 1 2 4 Miles

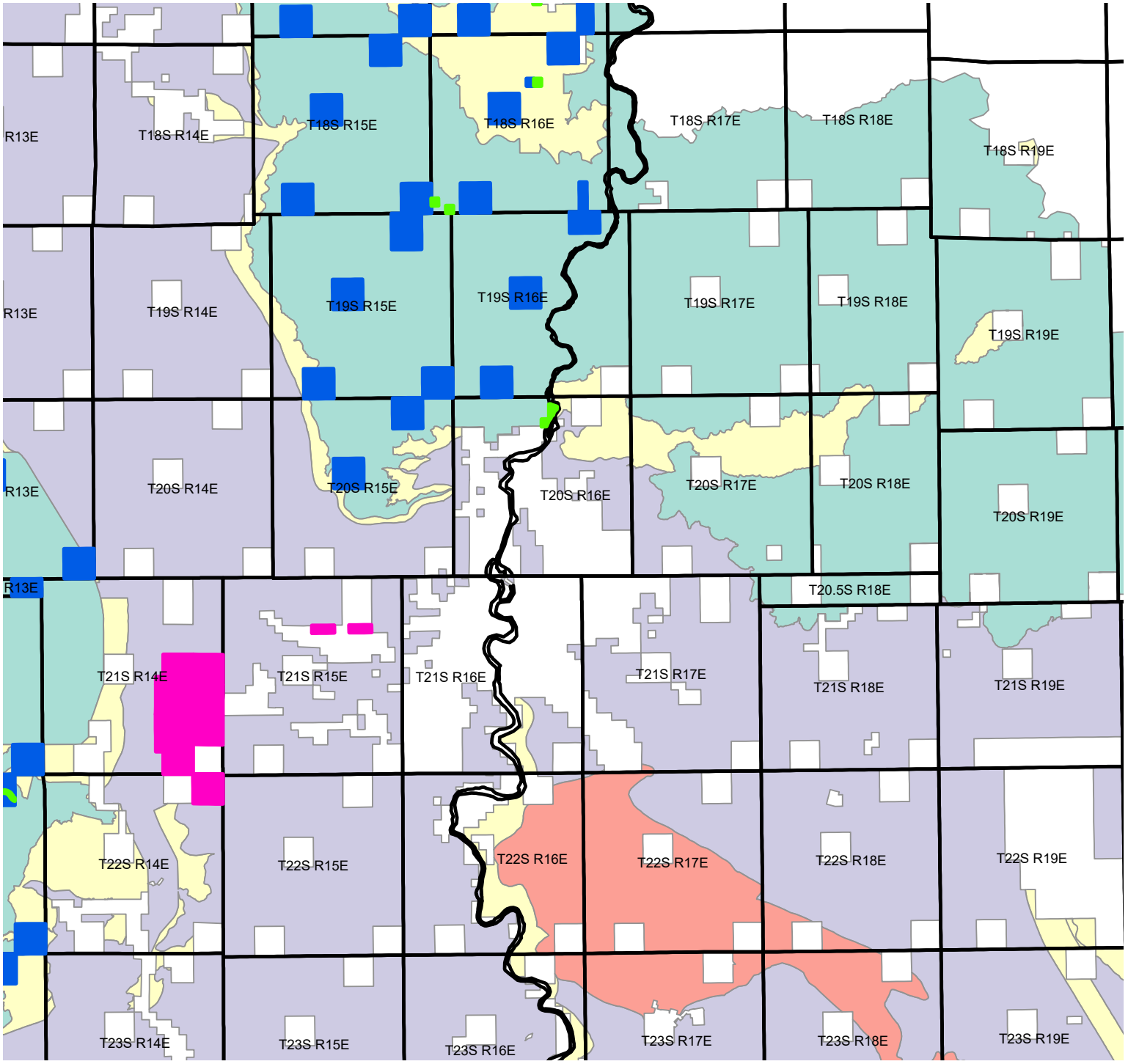
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	SE125	SE131	SE135B	SE140	SE145	SE182	SE216C
28	SE127	SE132	SE136	SE141	SE146	SE184	SE219
29	SE128	SE133	SE137	SE142	SE147	SE186	SE240
30	SE129	SE134	SE138	SE143	SE148	SE200	
SE124	SE130	SE135A	SE139	SE144	SE149	SE216A	

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

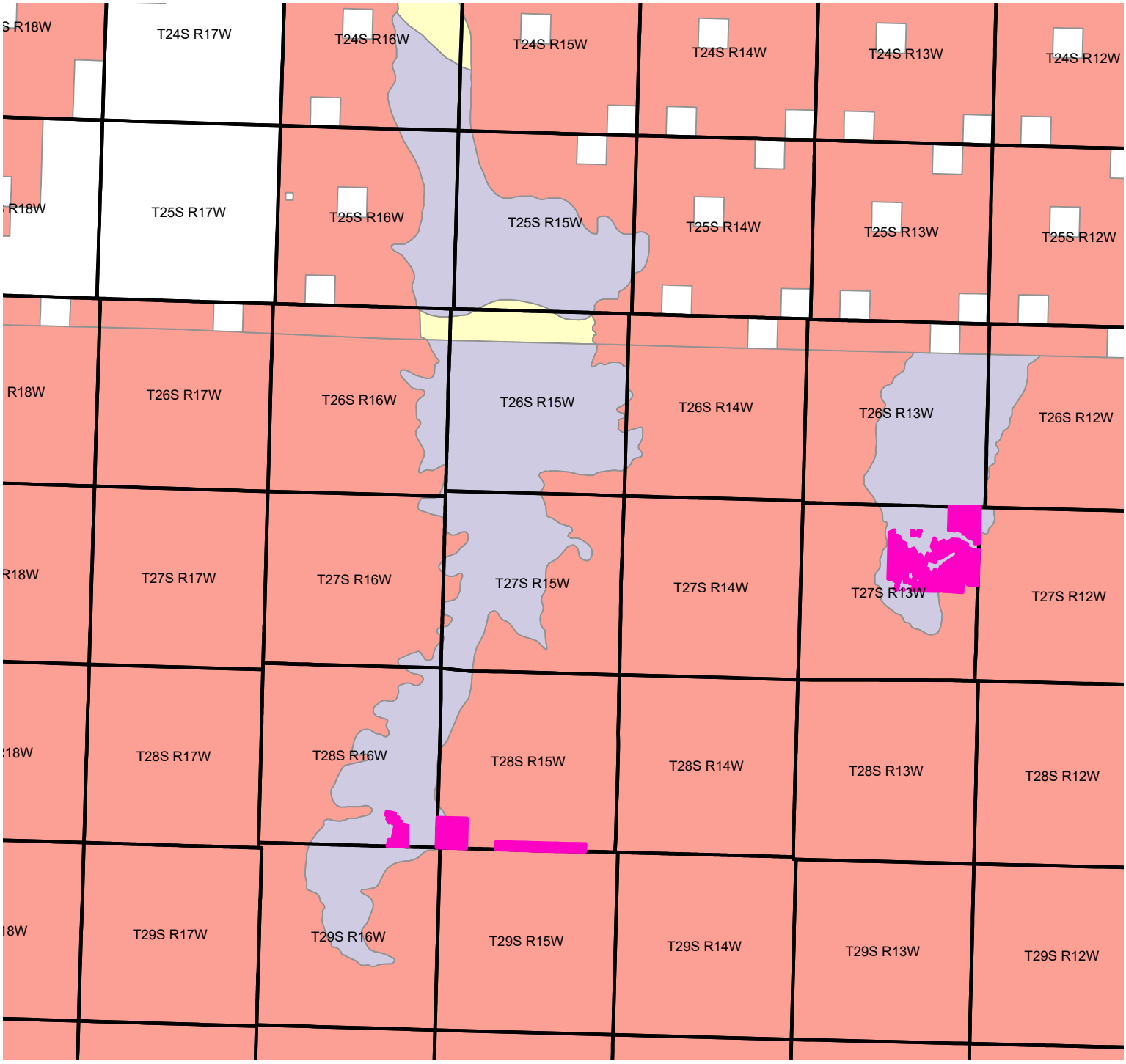
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page
42
43
44

Visual Resource Management Class

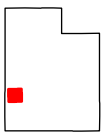
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

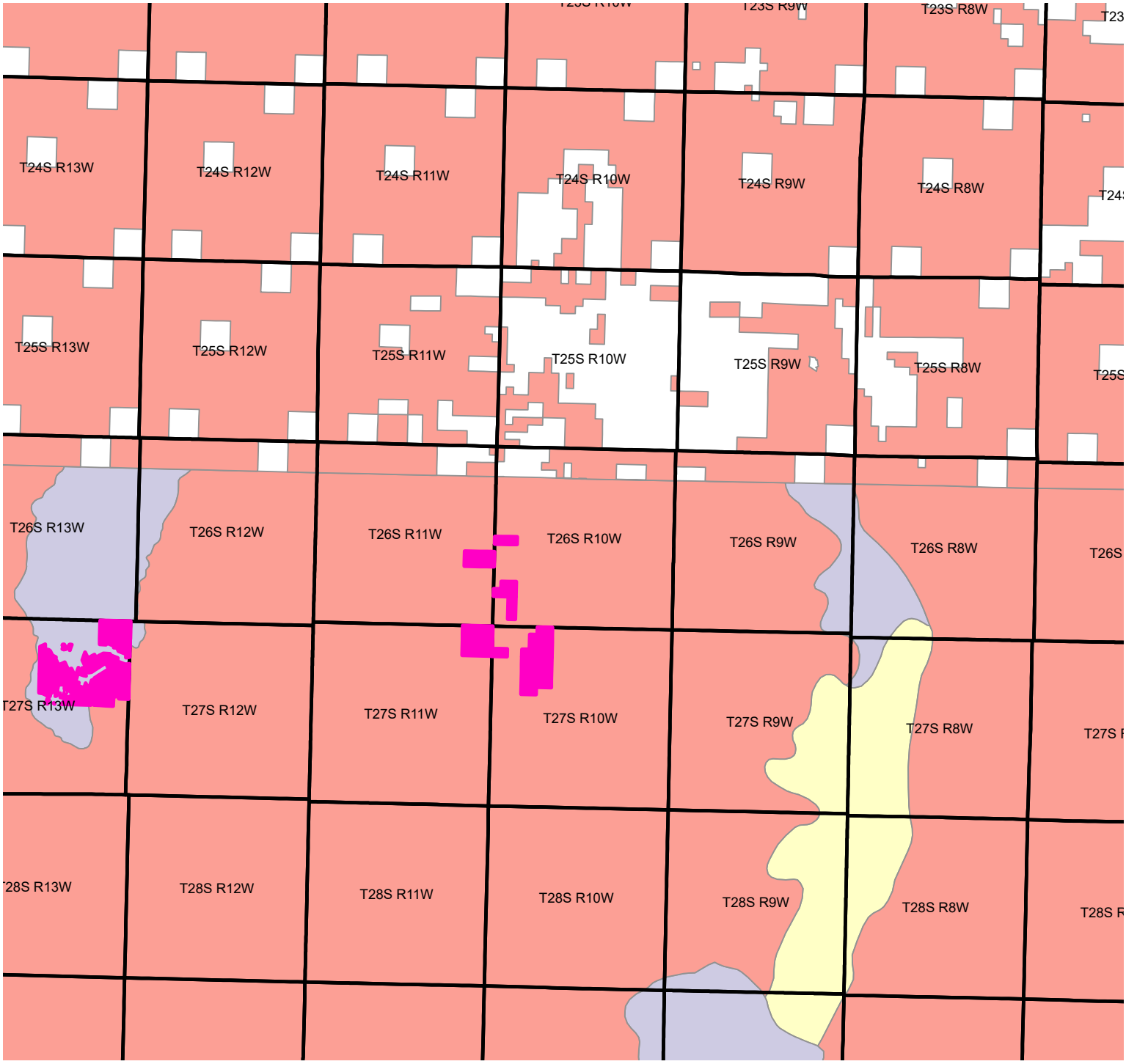
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page		
11	42	
10	12	9

Visual Resource Management Class

- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

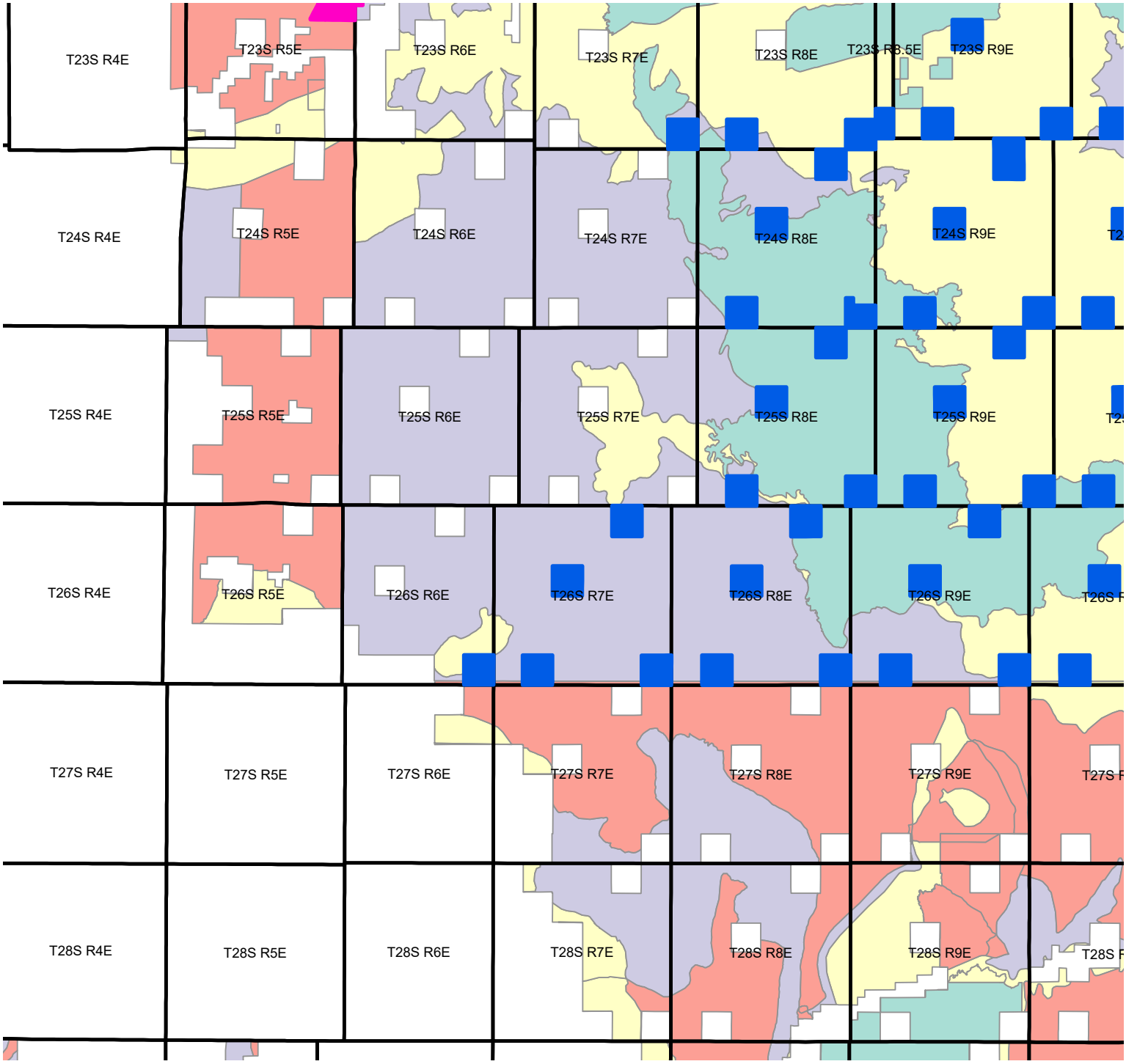
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page								
49	SE223	SE244	SE250	SE265	SE272	SE280B	SE284B	SE294
50	SE225	SE245	SE252	SE266	SE277	SE281	SE286	SE295
SE220	SE226	SE246	SE253	SE267	SE278	SE282	SE287A	SE296A
SE221	SE227	SE247	SE262	SE268	SE279A	SE283A	SE287B	SE296B
SE222	SE230	SE248	SE263	SE269	SE279B	SE283B	SE293A	SE297A
	SE243	SE249	SE264	SE271	SE280A	SE284A	SE293B	SE297B

Visual Resource Management Class

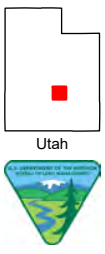
- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

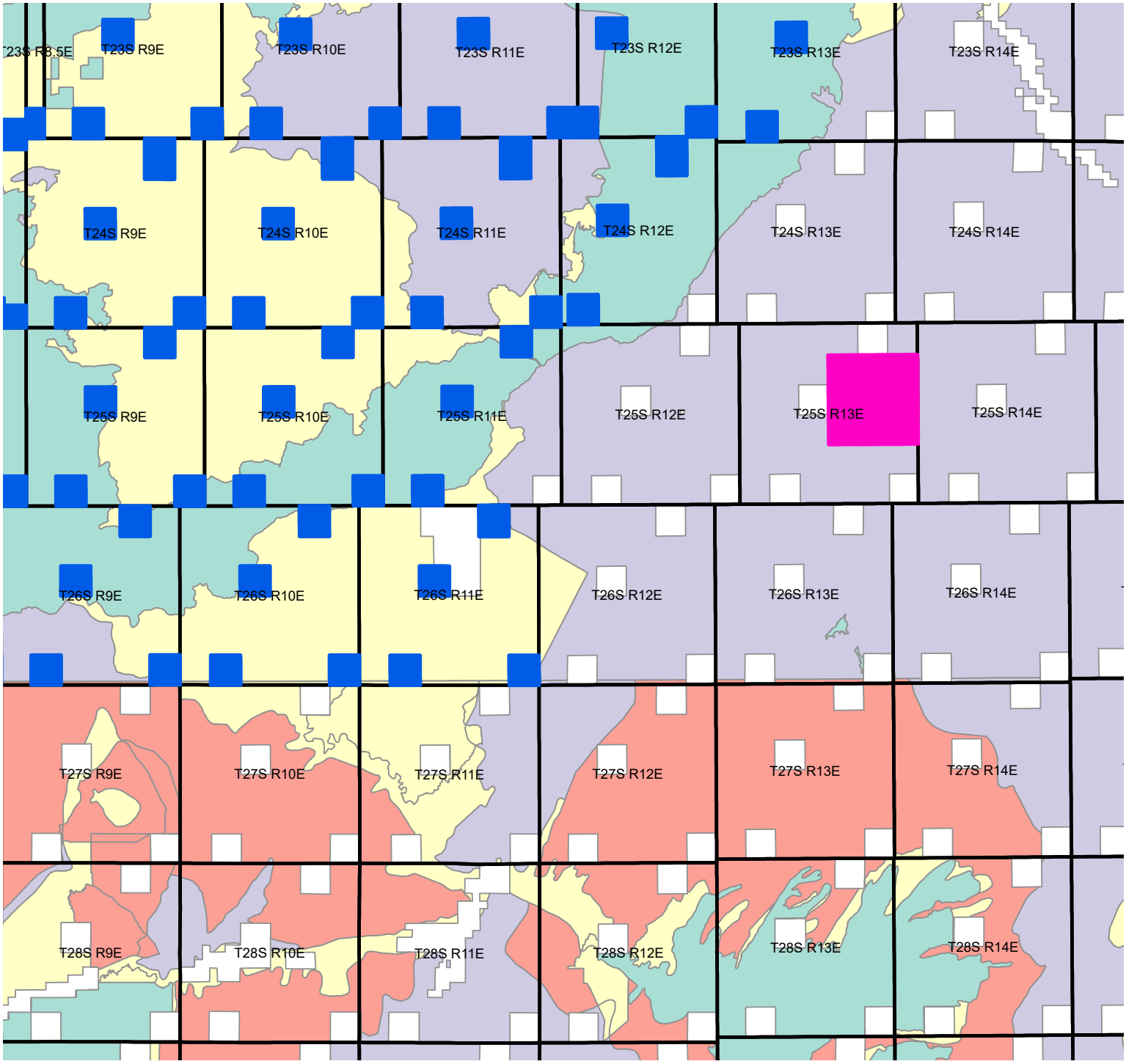
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page										
54	SE226	SE234	SE242	SE251	SE257	SE266	SE272	SE282	SE287A	SE291A
S285	SE227	SE235	SE246	SE252	SE258	SE267	SE273	SE283A	SE287B	SE291B
SE222	SE229	SE237	SE247	SE253	SE259	SE268	SE274	SE283B	SE288A	SE292A
SE223	SE230	SE238	SE248	SE254	SE260	SE269	SE275	SE284A	SE288B	SE292B
SE225	SE231	SE239	SE249	SE255	SE261	SE270	SE276	SE284B	SE289	
	SE233	SE241	SE250	SE256	SE265	SE271	SE281	SE286	SE290	

Visual Resource Management Class

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- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

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- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

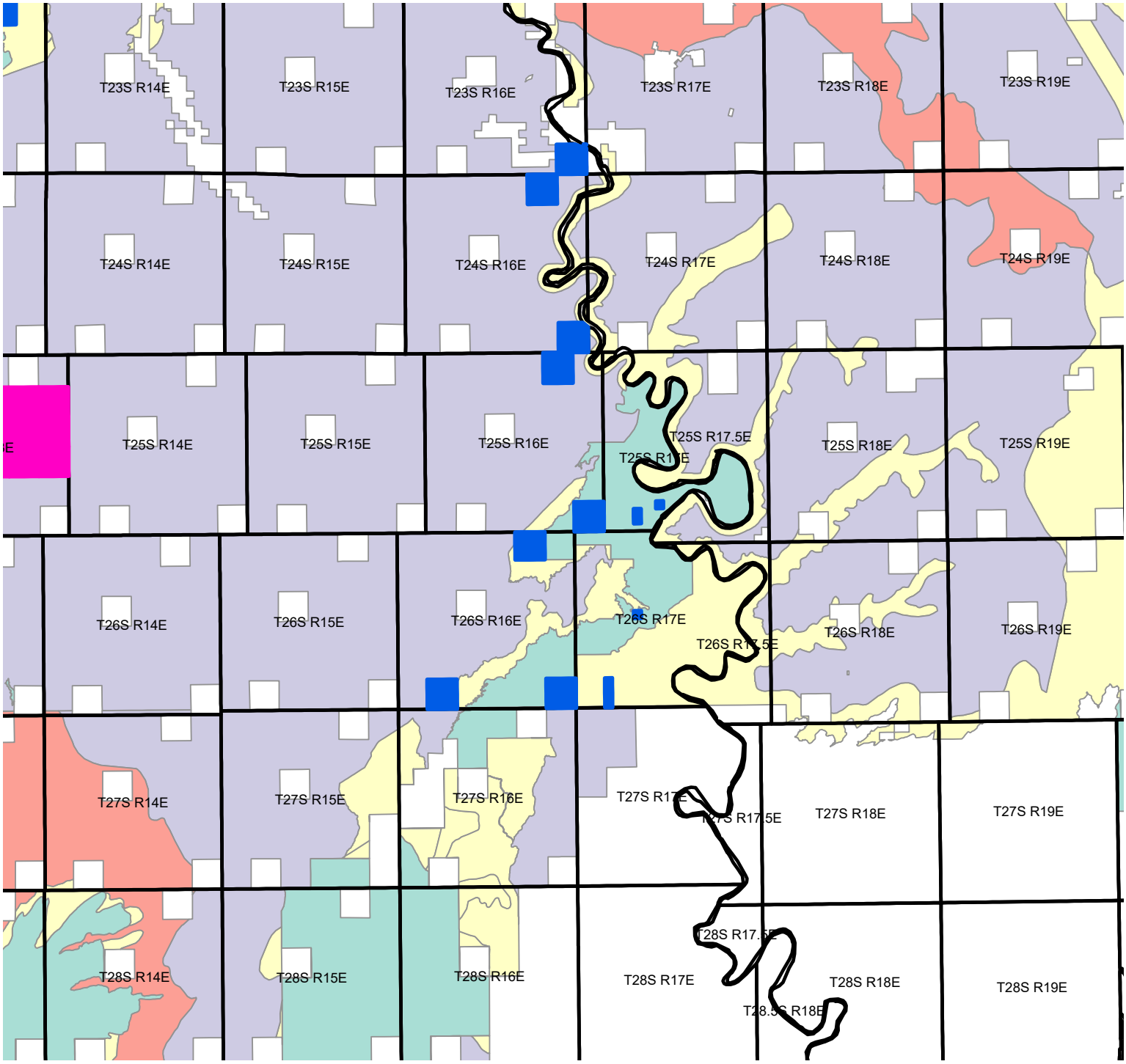
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page				
54	SE151	SE155	SE158A	SE160B
SE150A	SE152	SE156	SE158B	SE240
SE150B	SE153	SE157A	SE159	
	SE154	SE157B	SE160A	

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

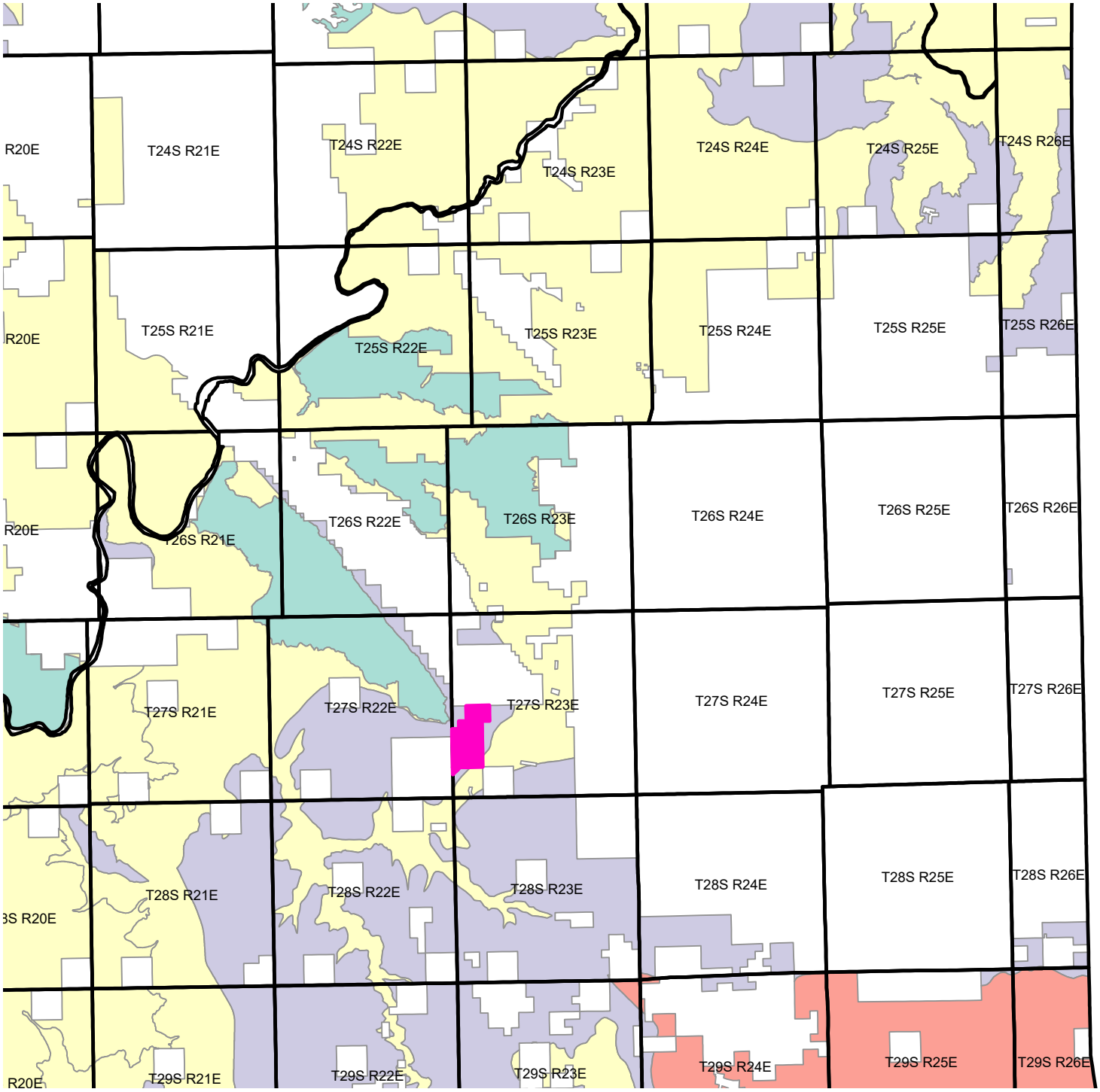
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Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page
32

Visual Resource Management Class
- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
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- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

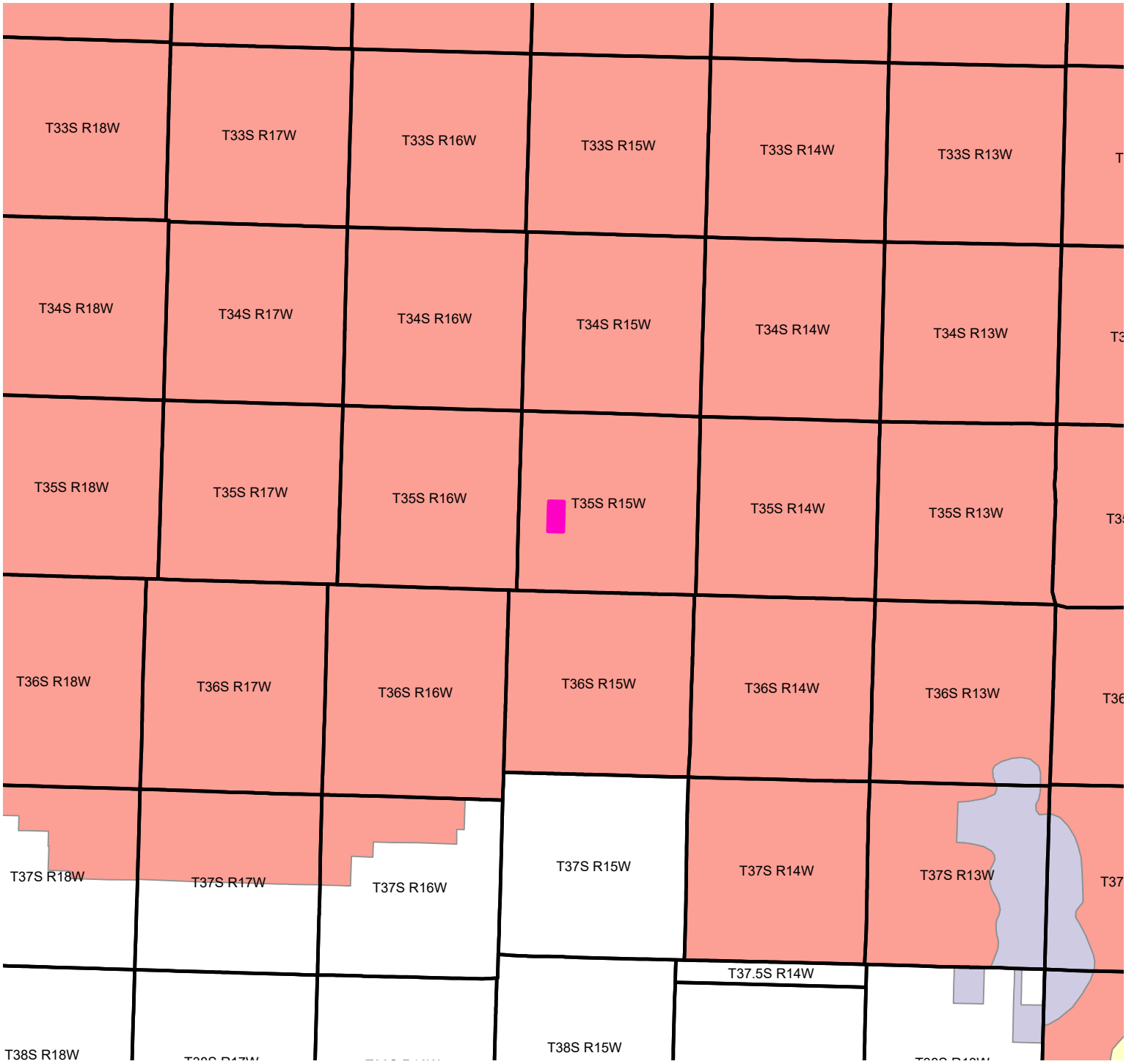
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July 3, 2023

Visual Resource Management Class Map



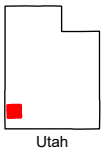
Parcel on Current Page
13

Visual Resource Management Class
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

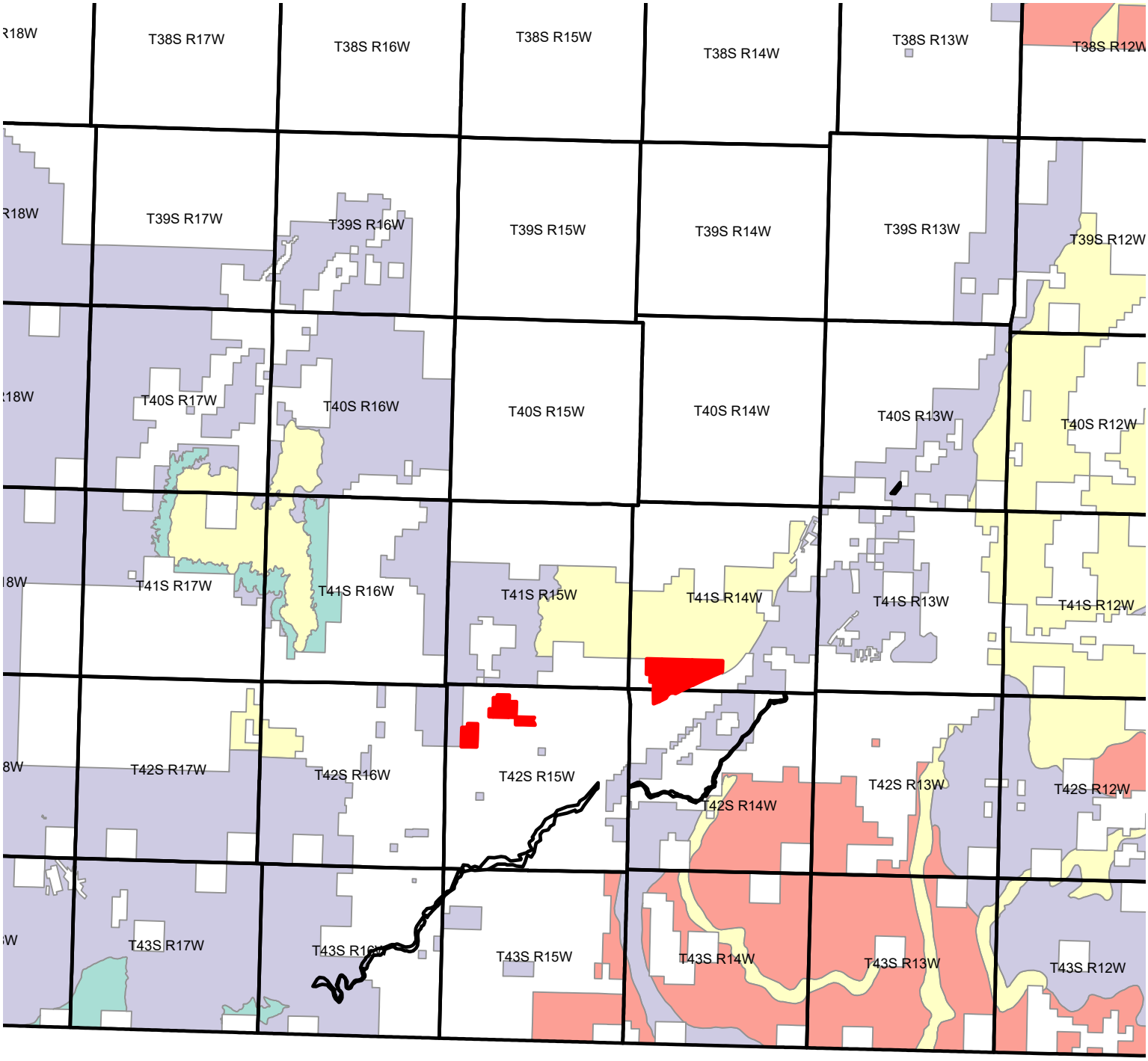
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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page	3E	7C
3C	7A	
3D	7B	

Visual Resource Management Class

- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition

- SITLA parcel conveyed to BLM (surface and minerals)
- SITLA parcel conveyed to BLM (minerals)
- BLM parcel conveyed to SITLA (surface and minerals)
- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

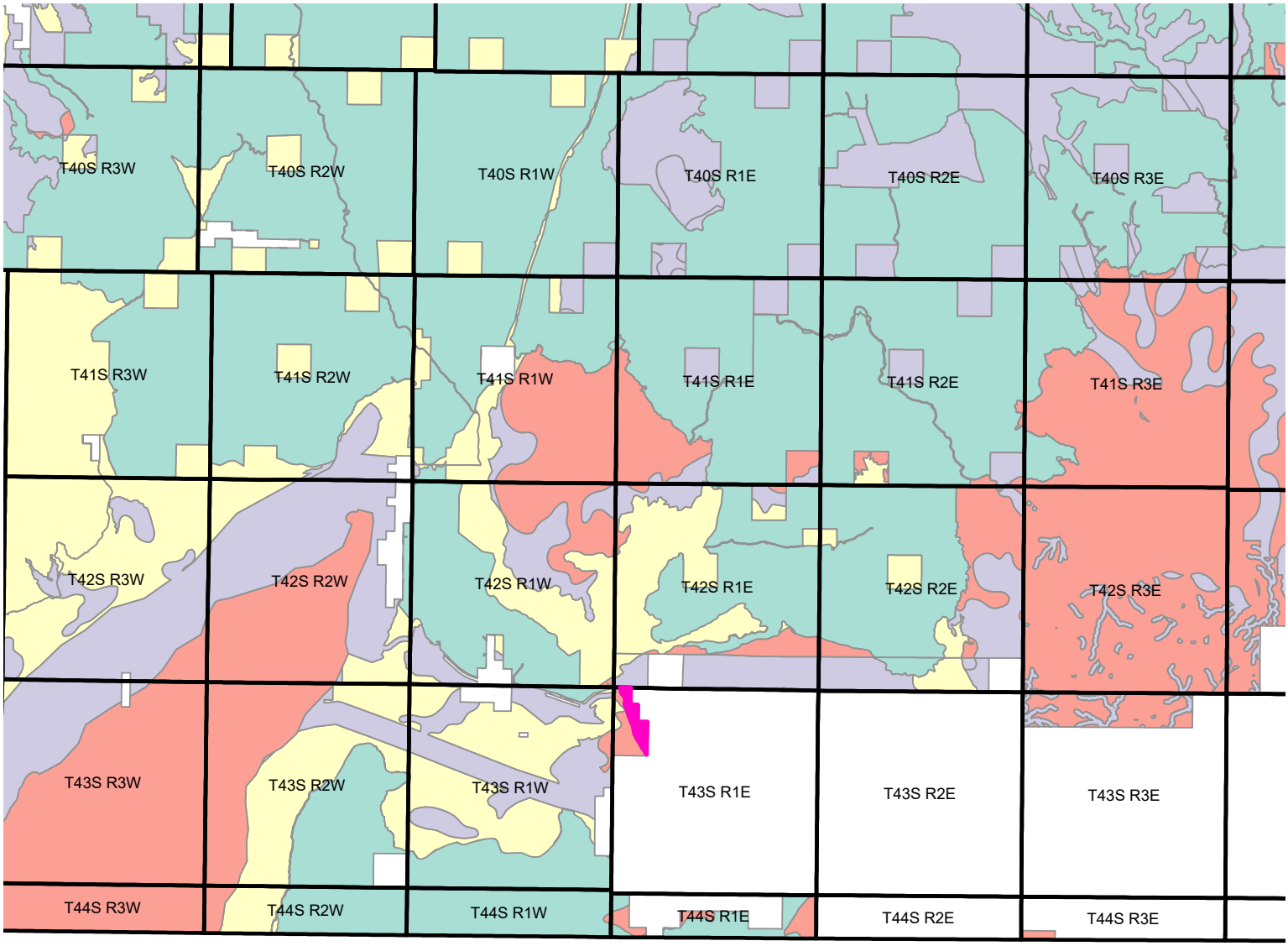
N

Utah

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July 3, 2023

Visual Resource Management Class Map



Parcel on Current Page
33

Visual Resource Management Class
- VRM Class I
- VRM Class II
- VRM Class III
- VRM Class IV

BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
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- BLM parcel conveyed to SITLA (minerals)
- BLM parcel conveyed to SITLA (surface)
- Equalization parcel

0 1 2 4 Miles

N

Utah

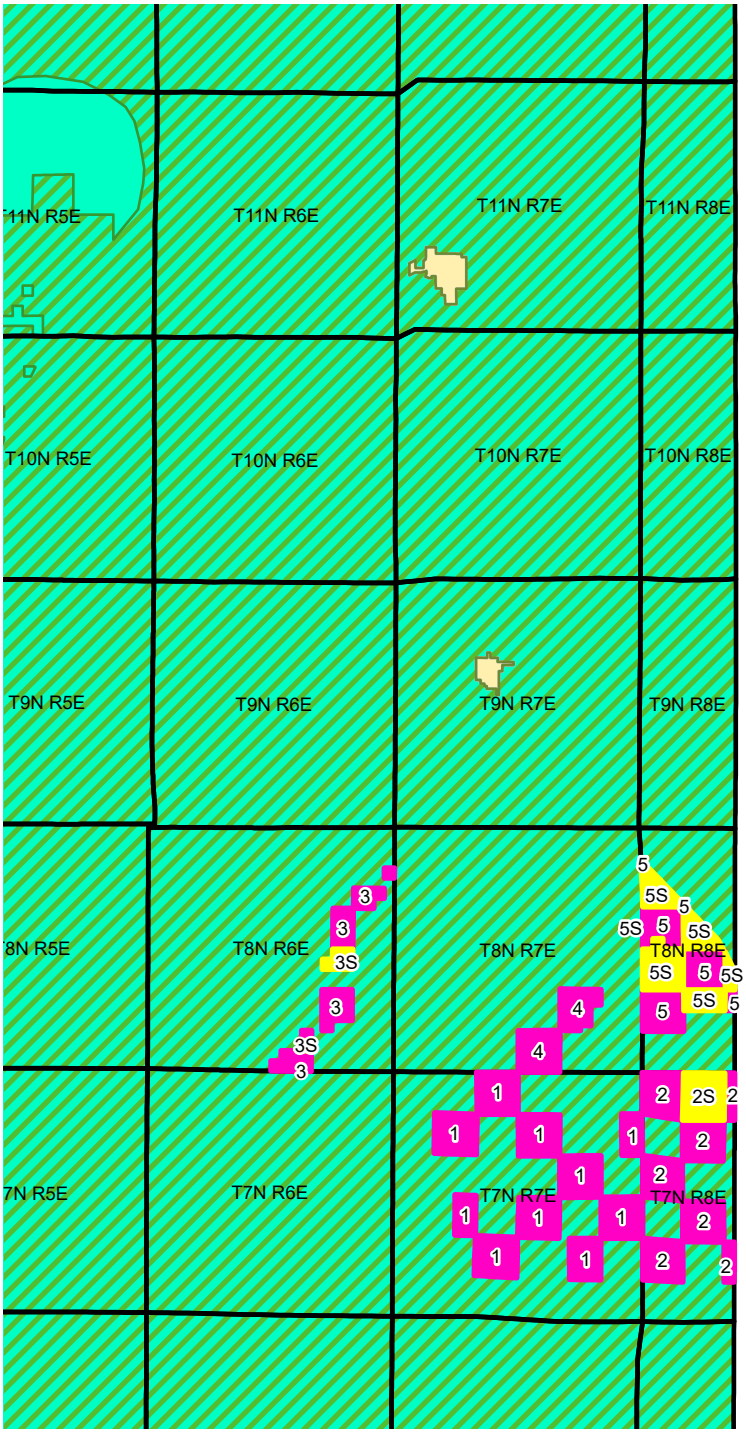
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July 3, 2023

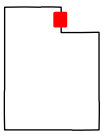
Appendix G Supplemental Biological Information and Maps

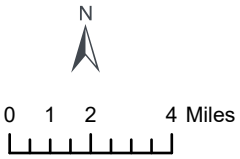
September 2023

Habitat Designation for Greater sage-grouse Map



Parcel on Current Page	2S	4
1	3	5
2	3S	5S





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August 17, 2023

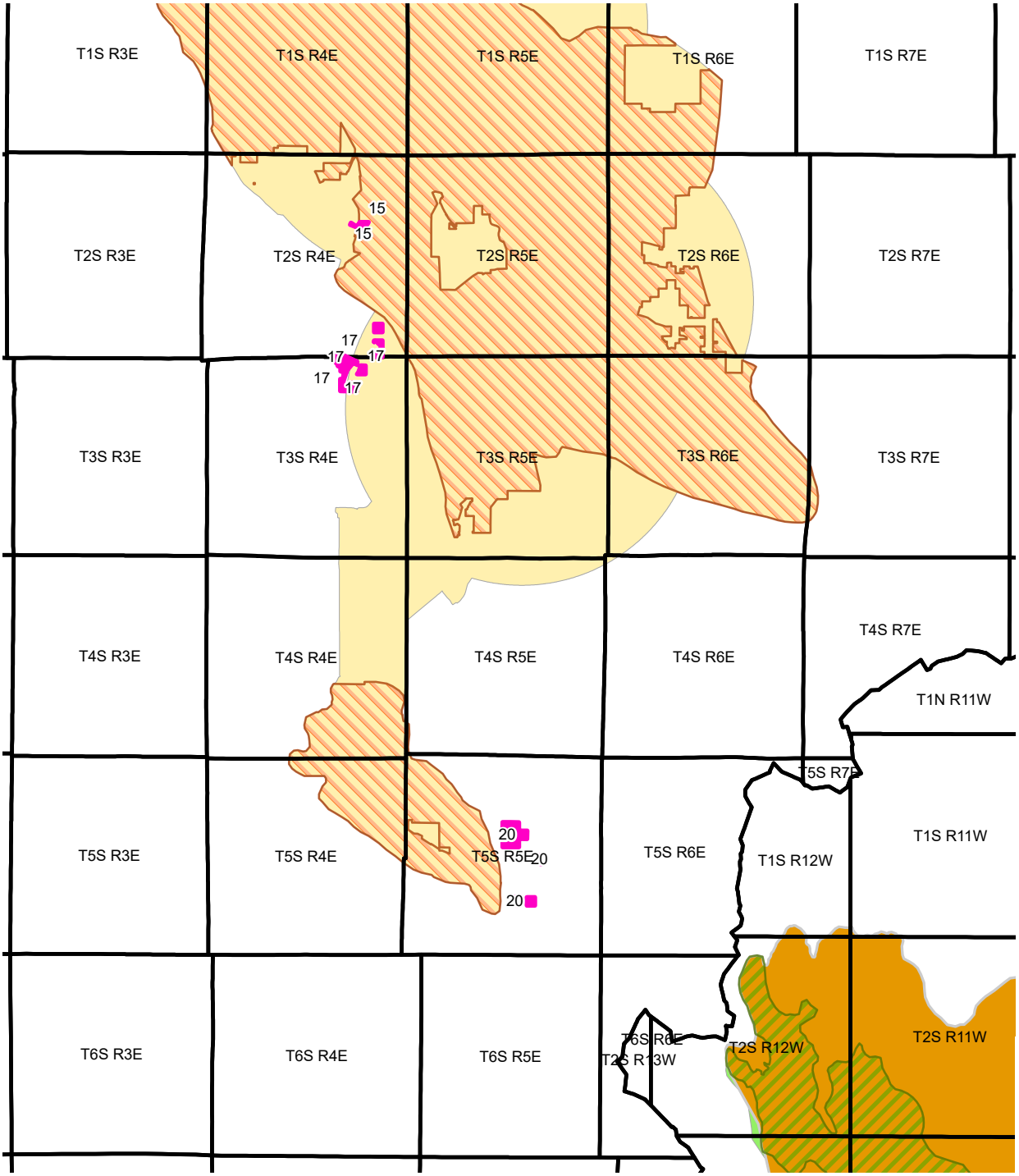
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

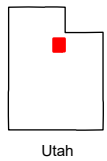
BLM and SITLA Parcel Disposition
- SITLA parcel conveyed to BLM (surface and minerals)
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- Equalization parcel

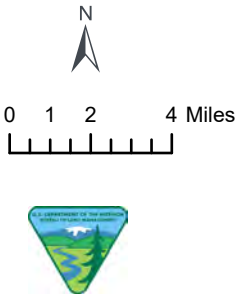
Utah SGMA Boundaries
- Rich-Morgan-Summit

Population Area
- Rich

Habitat Designation for Greater sage-grouse Map







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Parcel on Current Page
15
17
20

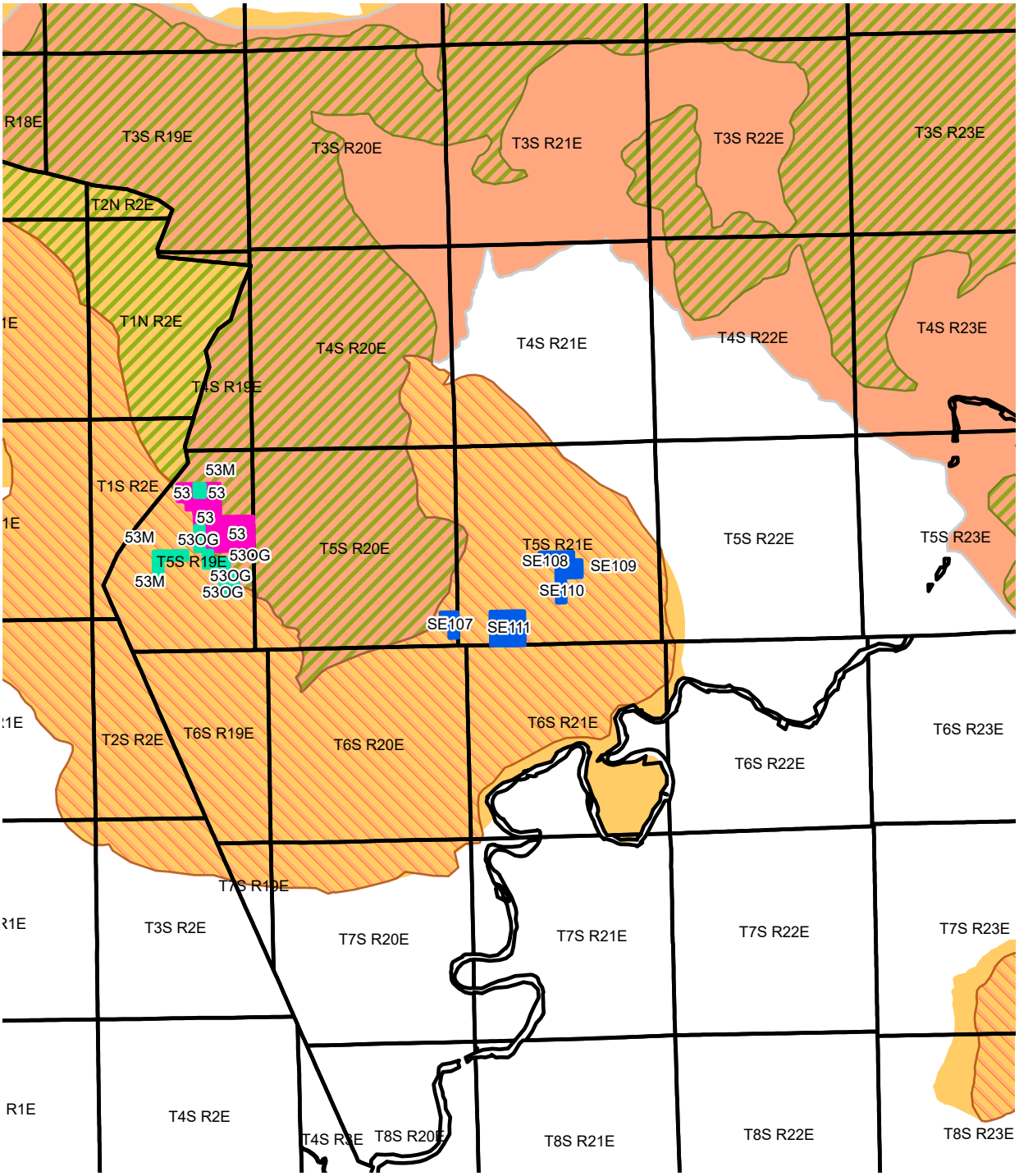
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

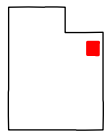
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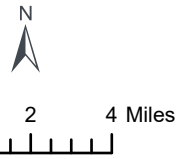
Utah SGMA Boundaries
- Strawberry

Population Area
- Rich
- Strawberry

Habitat Designation for Greater sage-grouse Map







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August 17, 2023

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53	SE107	SE110
53M	SE108	SE111

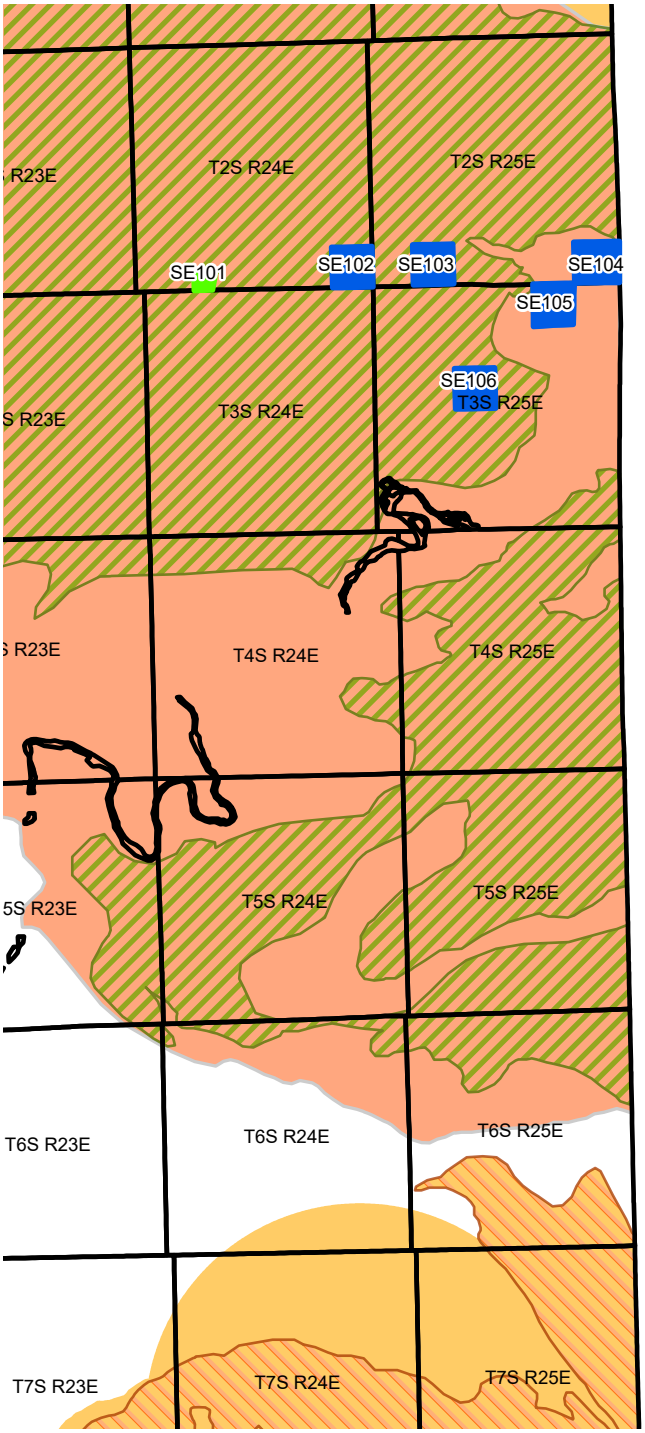
Utah SGMA Boundaries
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- 2015 Priority Habitat Management Area

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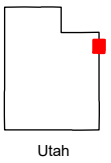
Utah SGMA Boundaries
- Uintah

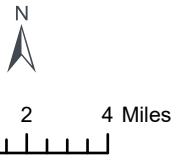
Population Area
- Uintah

Habitat Designation for Greater sage-grouse Map



Parcel on Current Page		
SE101	SE104	
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SE103	SE106	







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August 17, 2023

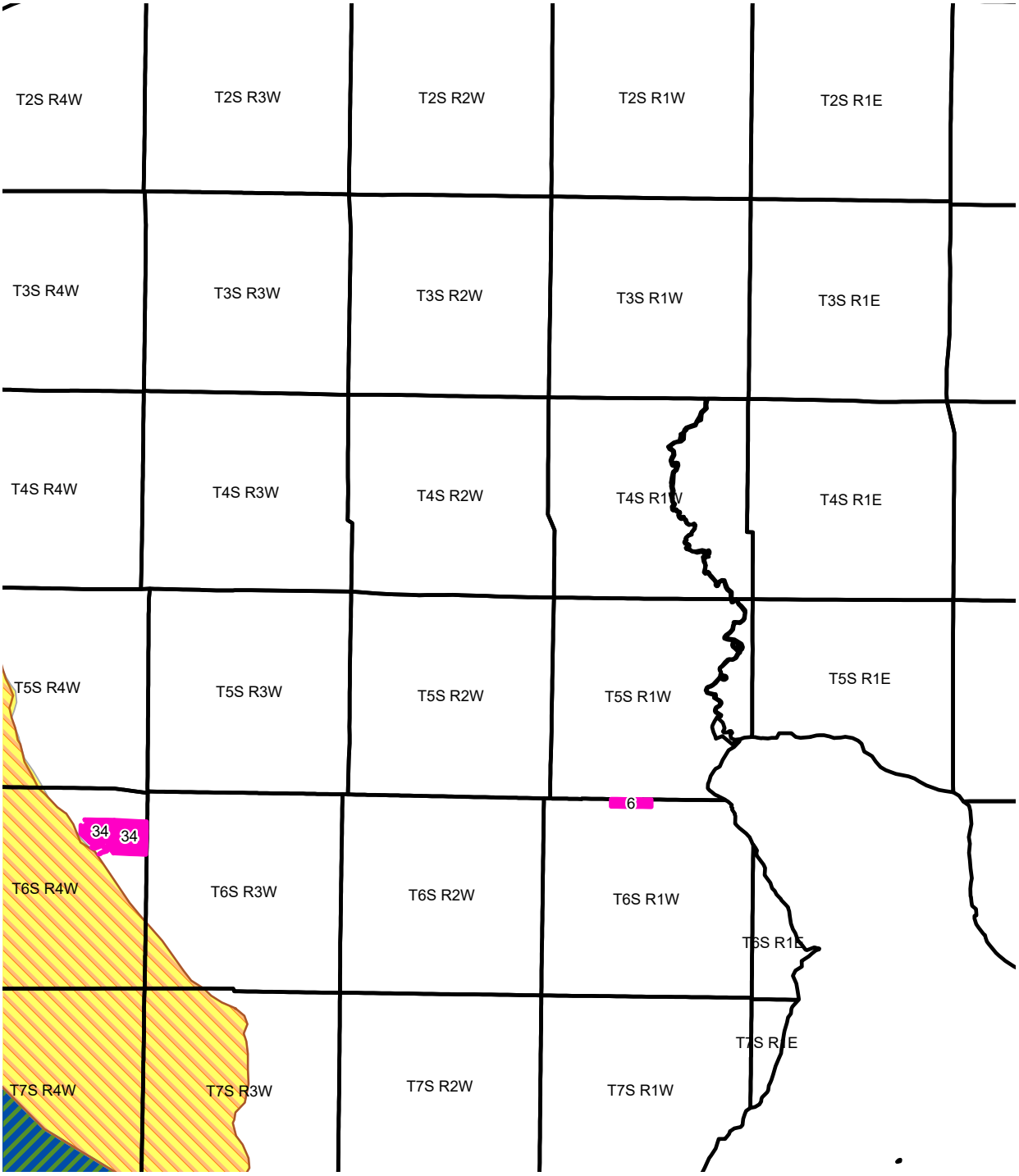
Utah SGMA Boundaries
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- 2015 Priority Habitat Management Area

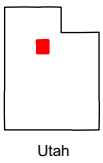
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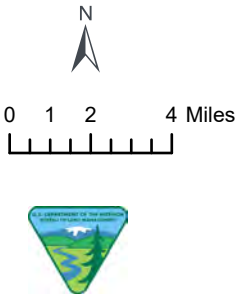
Utah SGMA Boundaries
- Uintah

Population Area
- Uintah

Habitat Designation for Greater sage-grouse Map







No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

August 17, 2023

Parcel on Current Page
34
6

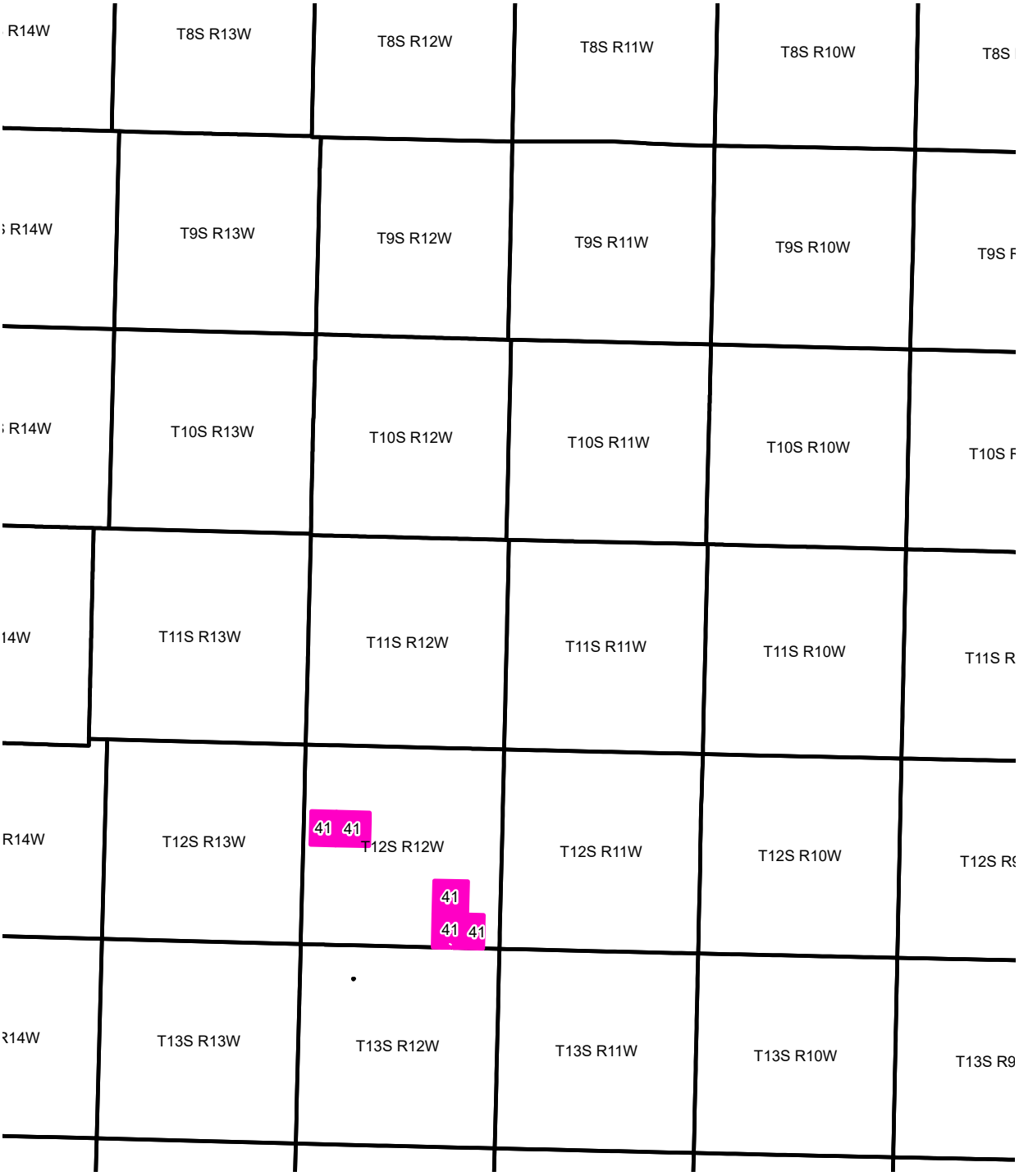
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

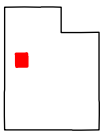
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- Equalization parcel

Utah SGMA Boundaries
- Sheeprock Mountains

Population Area
- Sheeprocks

Habitat Designation for Greater sage-grouse Map







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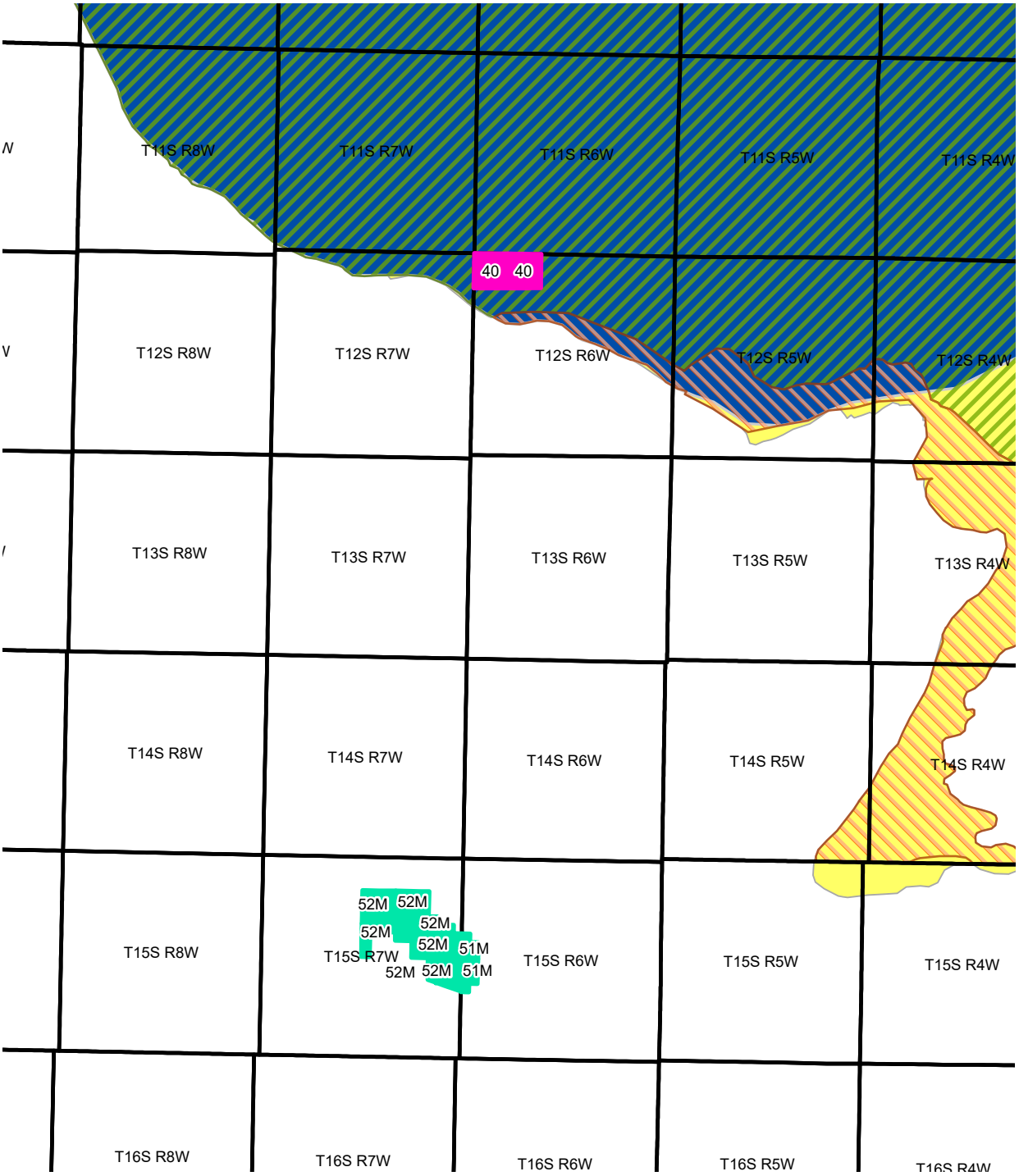
August 17, 2023

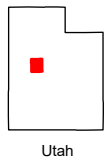
Parcel on Current Page
41

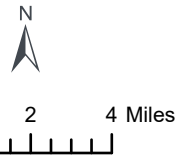
Utah SGMA Boundaries
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Habitat Designation for Greater sage-grouse Map









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August 17, 2023

Parcel on Current Page
40
51M
52M

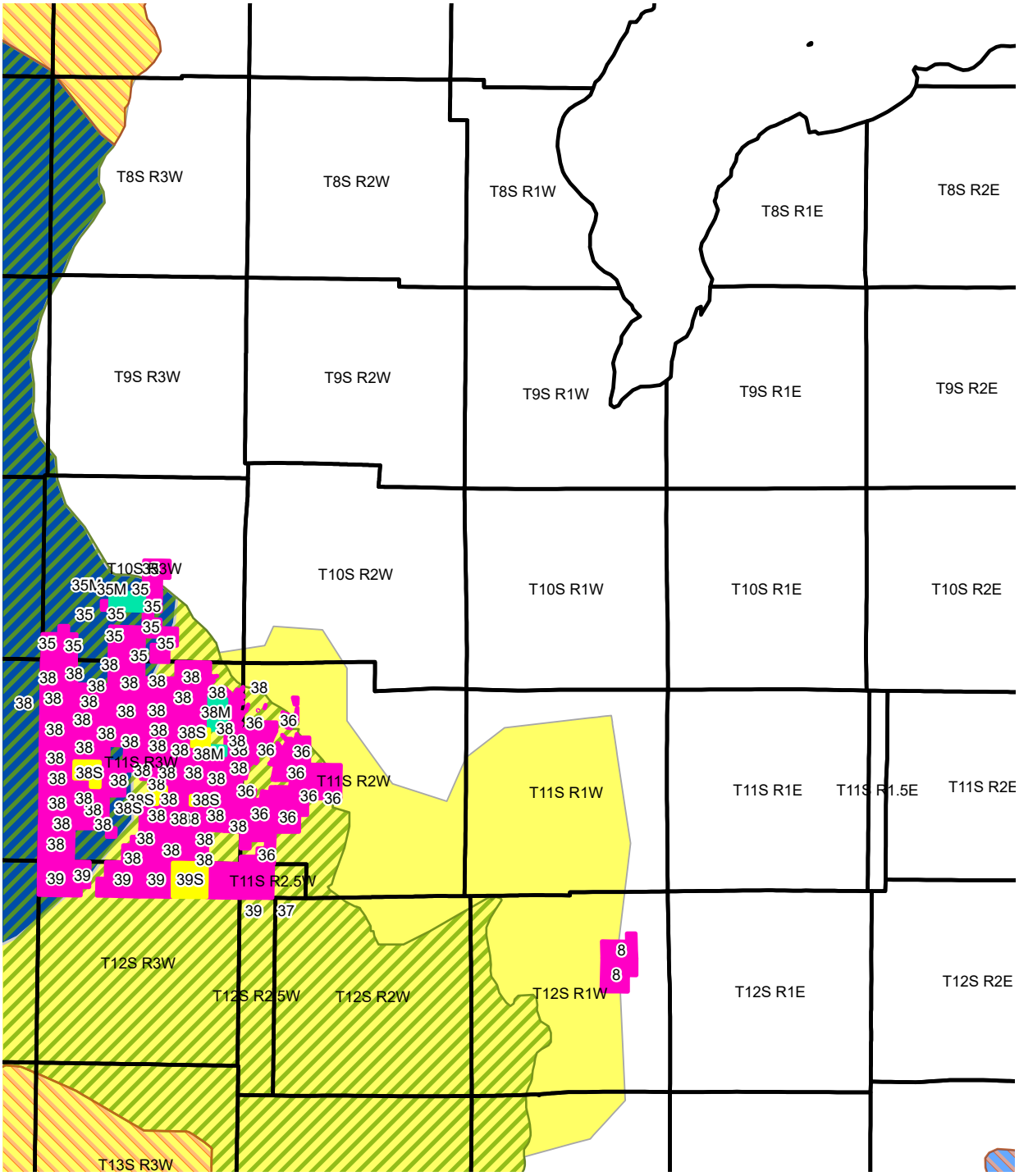
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

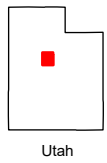
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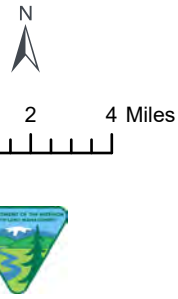
Utah SGMA Boundaries
- Sheeprock Mountains

Population Area
- Sheeprocks

Habitat Designation for Greater sage-grouse Map







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August 17, 2023

Parcel on Current Page			
35	36	38M	39S
35M	37	38S	8
	38	39	

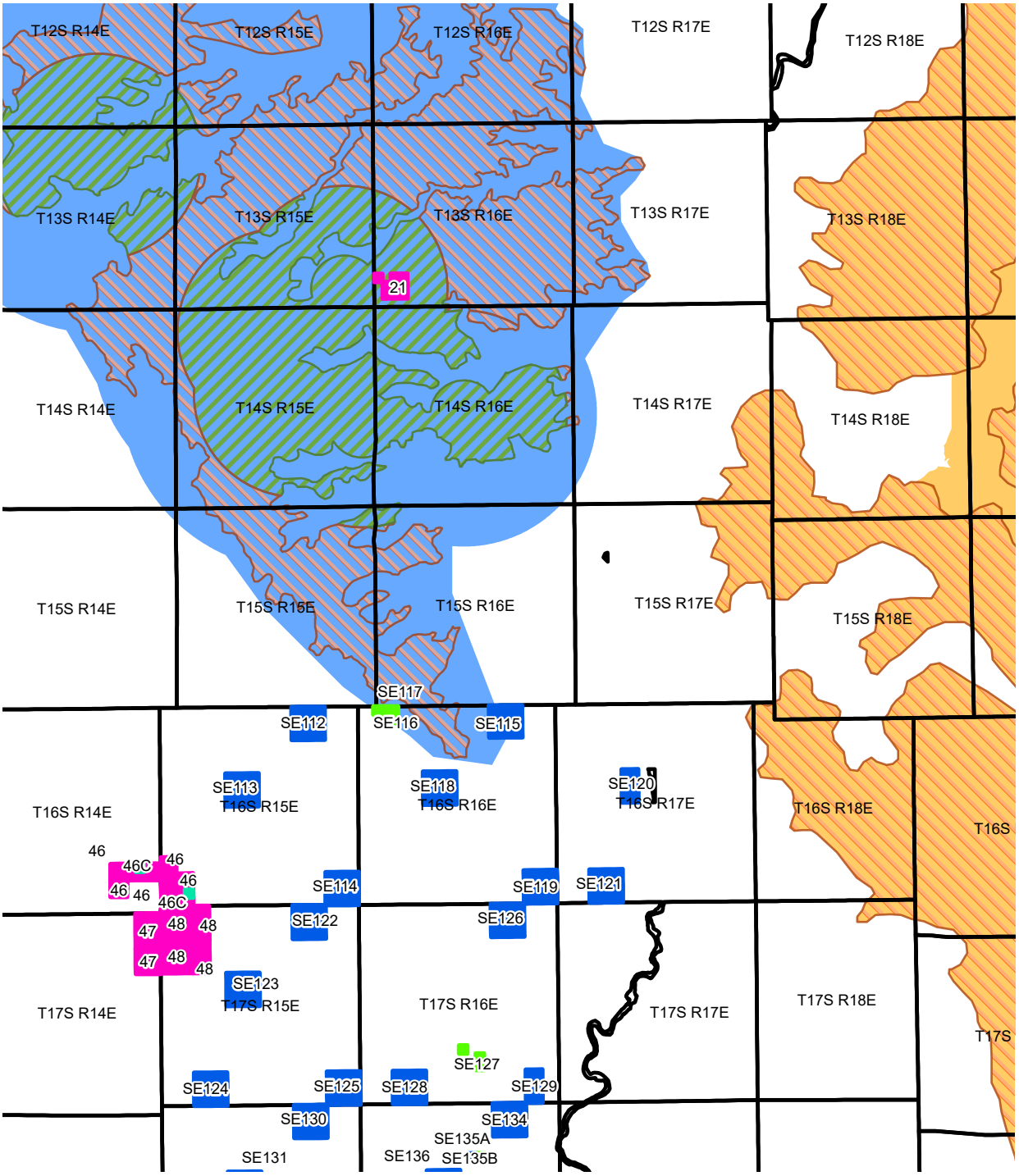
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

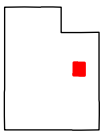
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Utah SGMA Boundaries
- Sheeprock Mountains

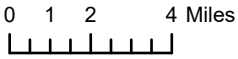
Population Area
- Carbon
- Sheeprocks

Habitat Designation for Greater sage-grouse Map











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August 17, 2023

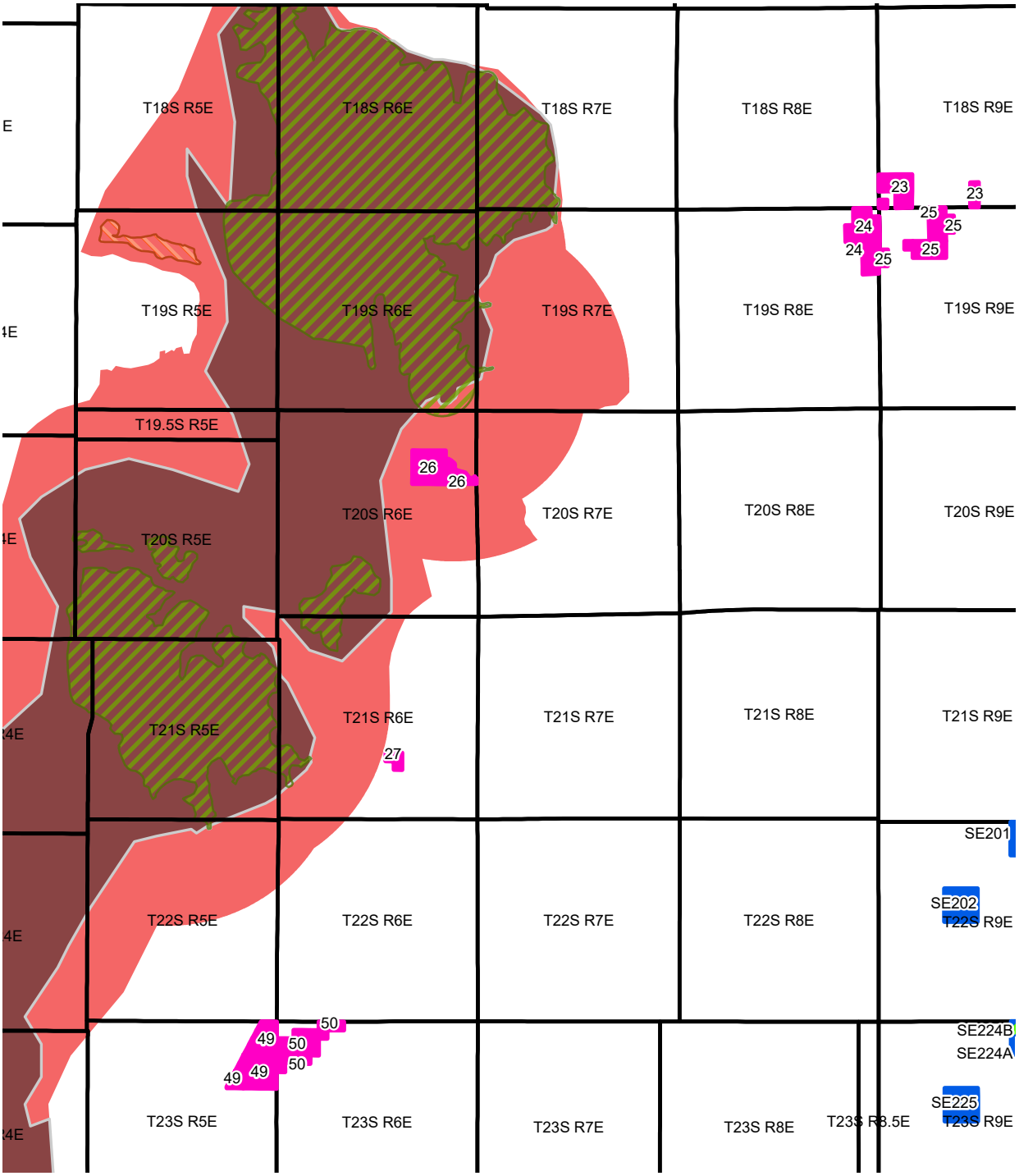
Parcel on Current Page					
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46	SE113	SE118	SE123	SE128	SE135A
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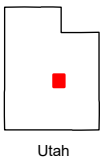
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

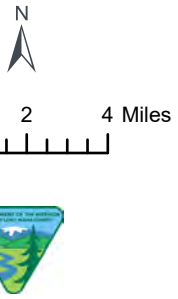
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Population Area
- Carbon
- Uintah

Habitat Designation for Greater sage-grouse Map







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August 17, 2023

Parcel on Current Page			
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24	27	SE202	
25	49	SE224A	
	50	SE224B	

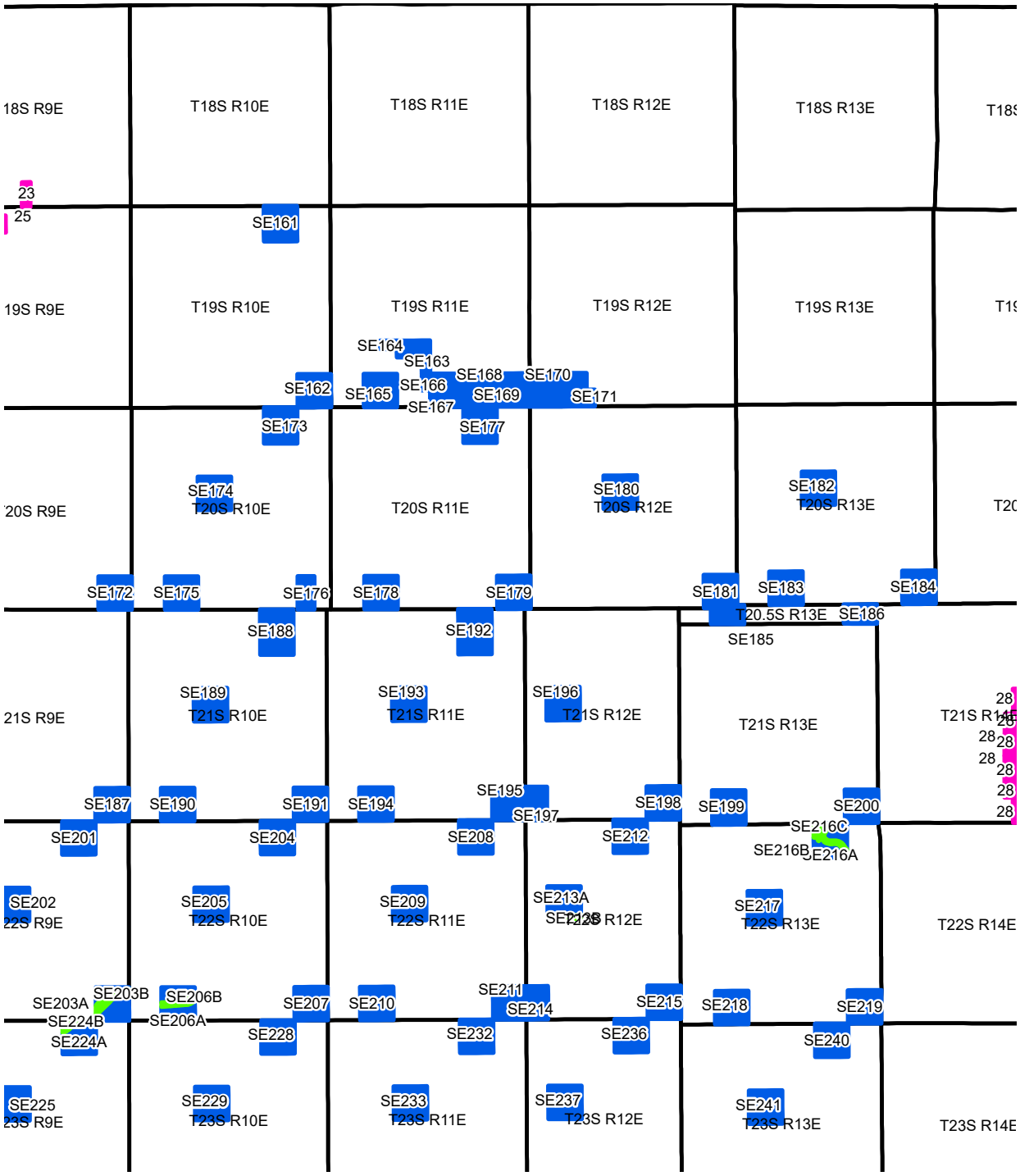
Utah SGMA Boundaries
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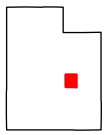
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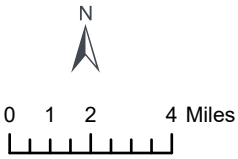
Utah SGMA Boundaries
- Parker Mountain-Emery

Population Area
- Emery

Habitat Designation for Greater sage-grouse Map









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Parcel on Current Page											
23	SE161	SE165	SE172	SE179	SE186	SE193	SE200	SE206A	SE212	SE216C	SE228	SE241
25	SE162	SE166	SE173	SE180	SE187	SE194	SE201	SE206B	SE213A	SE217	SE229	
28	SE163	SE167	SE174	SE181	SE188	SE195	SE202	SE207	SE213B	SE218	SE232	
SE161	SE164	SE168	SE175	SE182	SE189	SE196	SE203A	SE208	SE214	SE219	SE233	
SE162	SE165	SE169	SE176	SE183	SE190	SE197	SE203B	SE209	SE215	SE224A	SE236	
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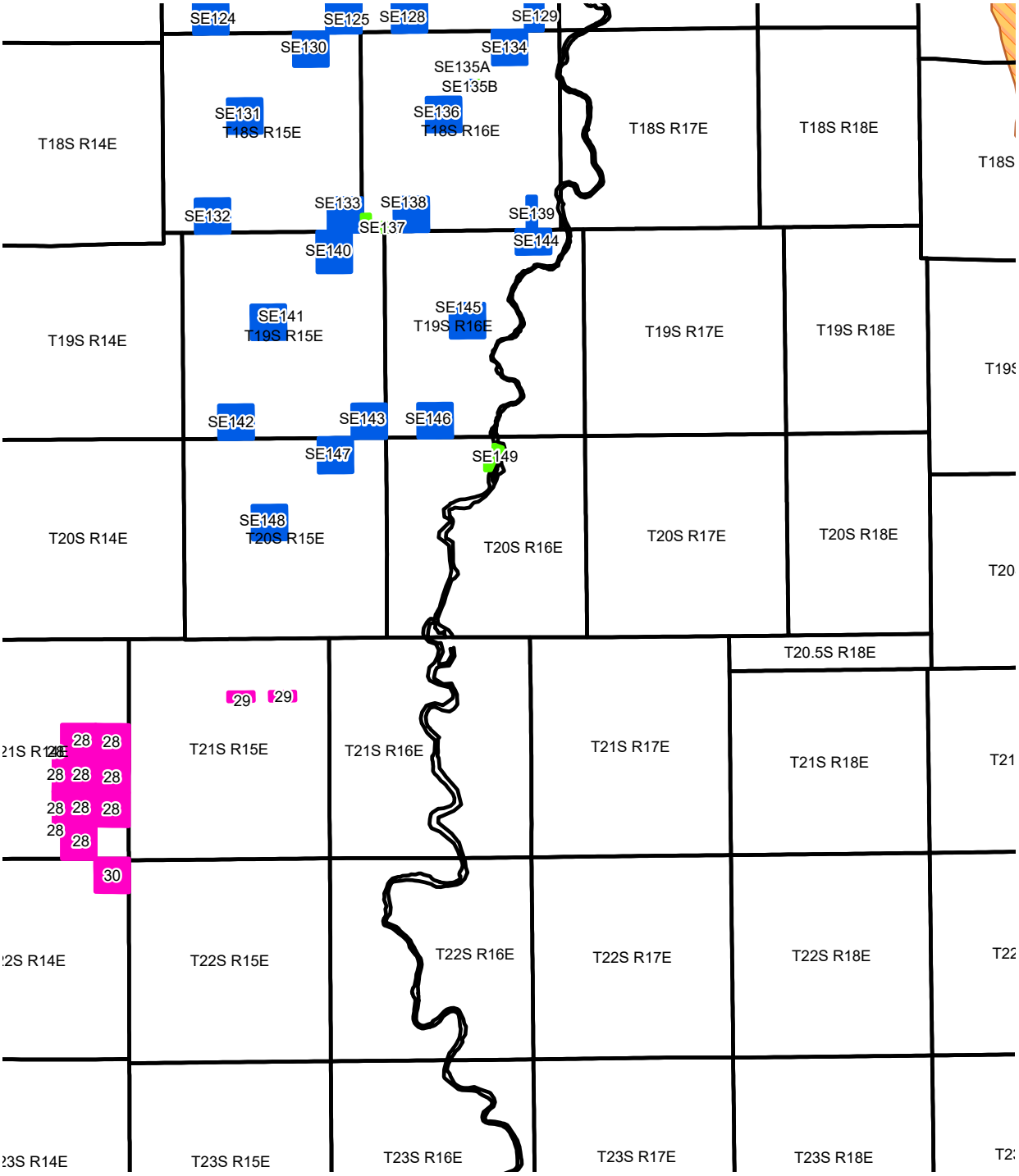
Utah SGMA Boundaries

- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

BLM and SITLA Parcel Disposition

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Habitat Designation for Greater sage-grouse Map



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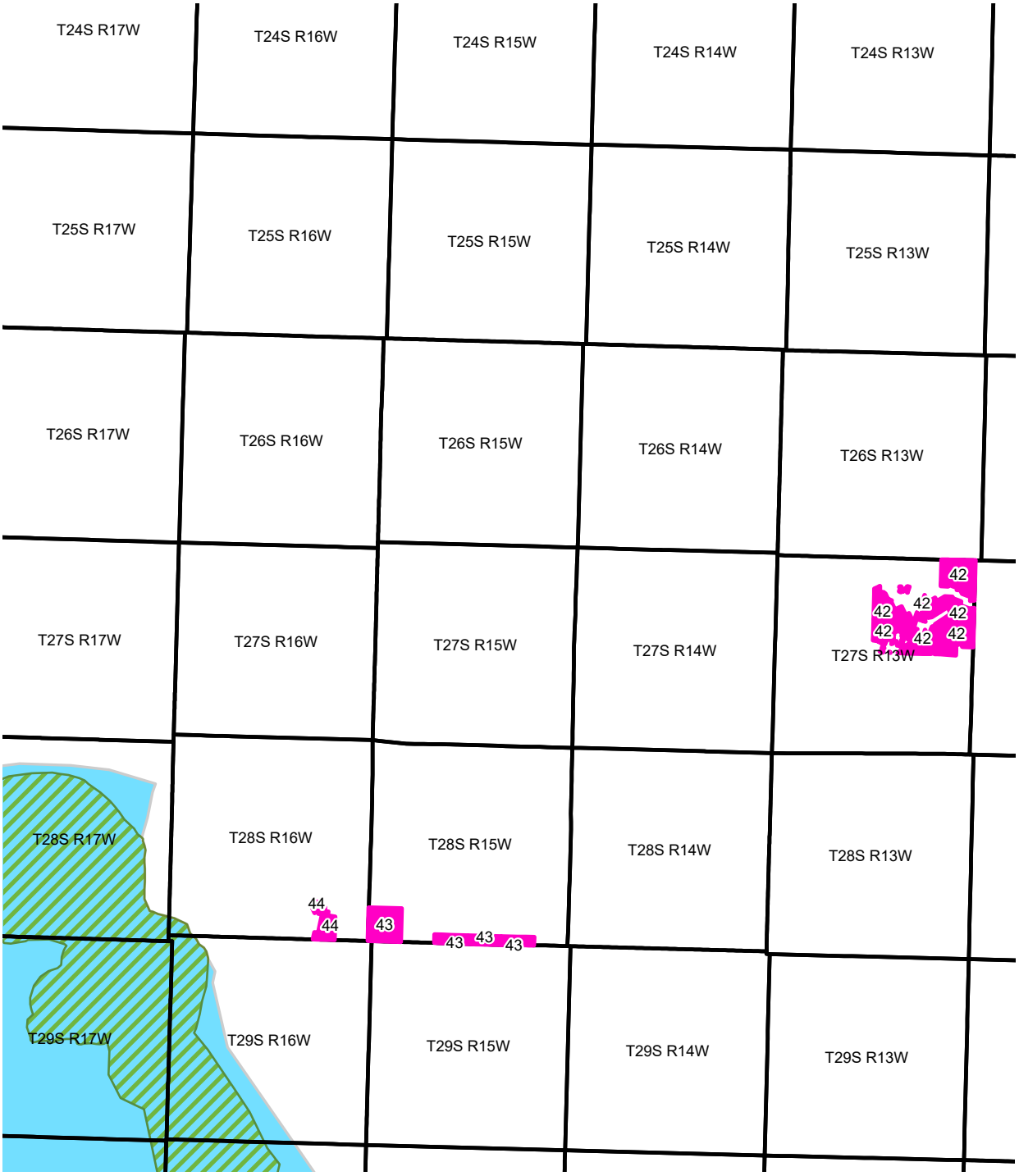
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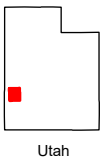
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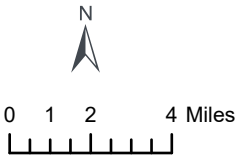
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Population Area
- Uintah

Habitat Designation for Greater sage-grouse Map







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August 17, 2023

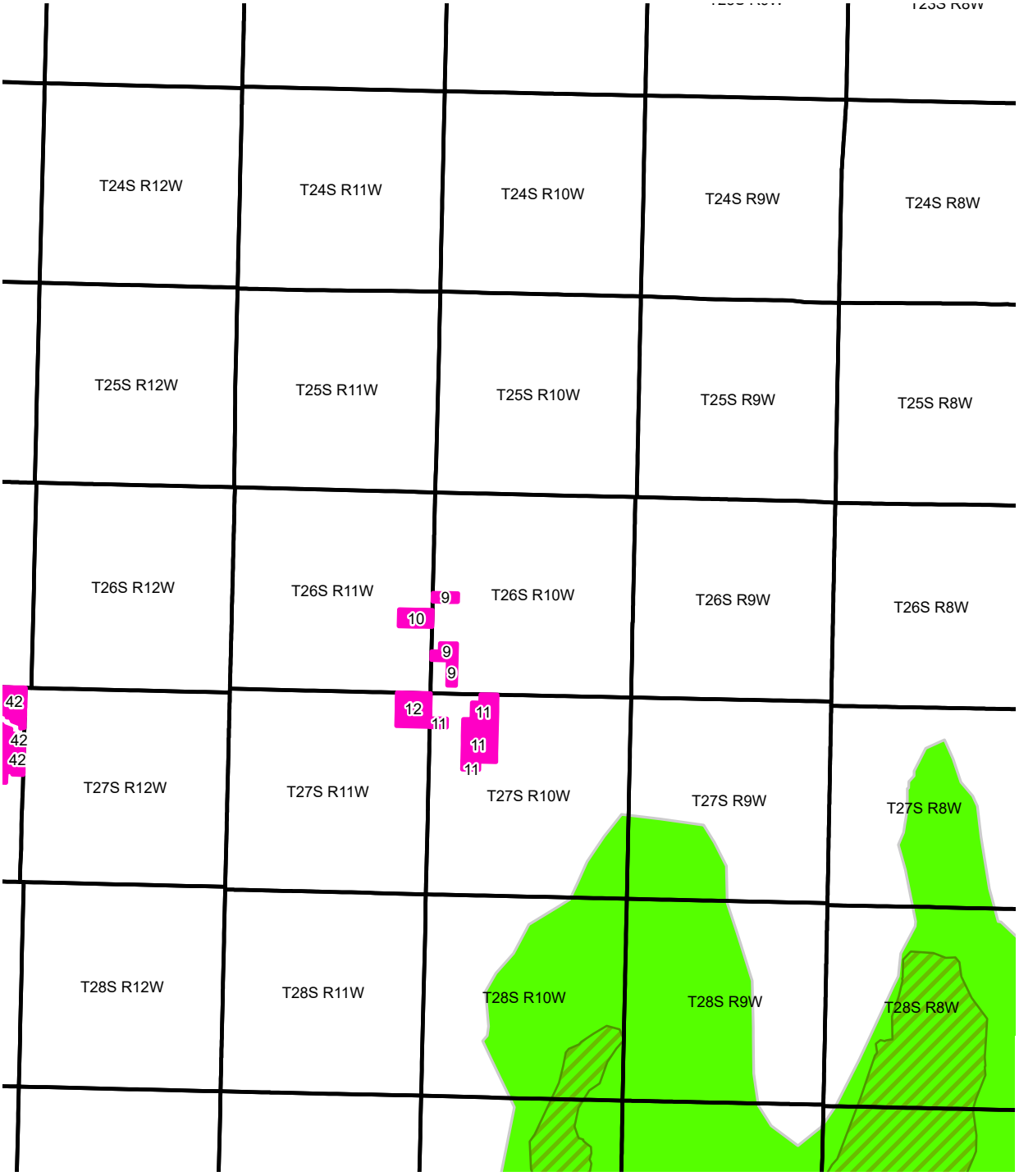
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42
43
44

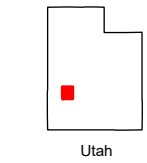
Utah SGMA Boundaries
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Utah SGMA Boundaries
- Hamlin Valley

Habitat Designation for Greater sage-grouse Map





N

0 1 2 4 Miles

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August 17, 2023

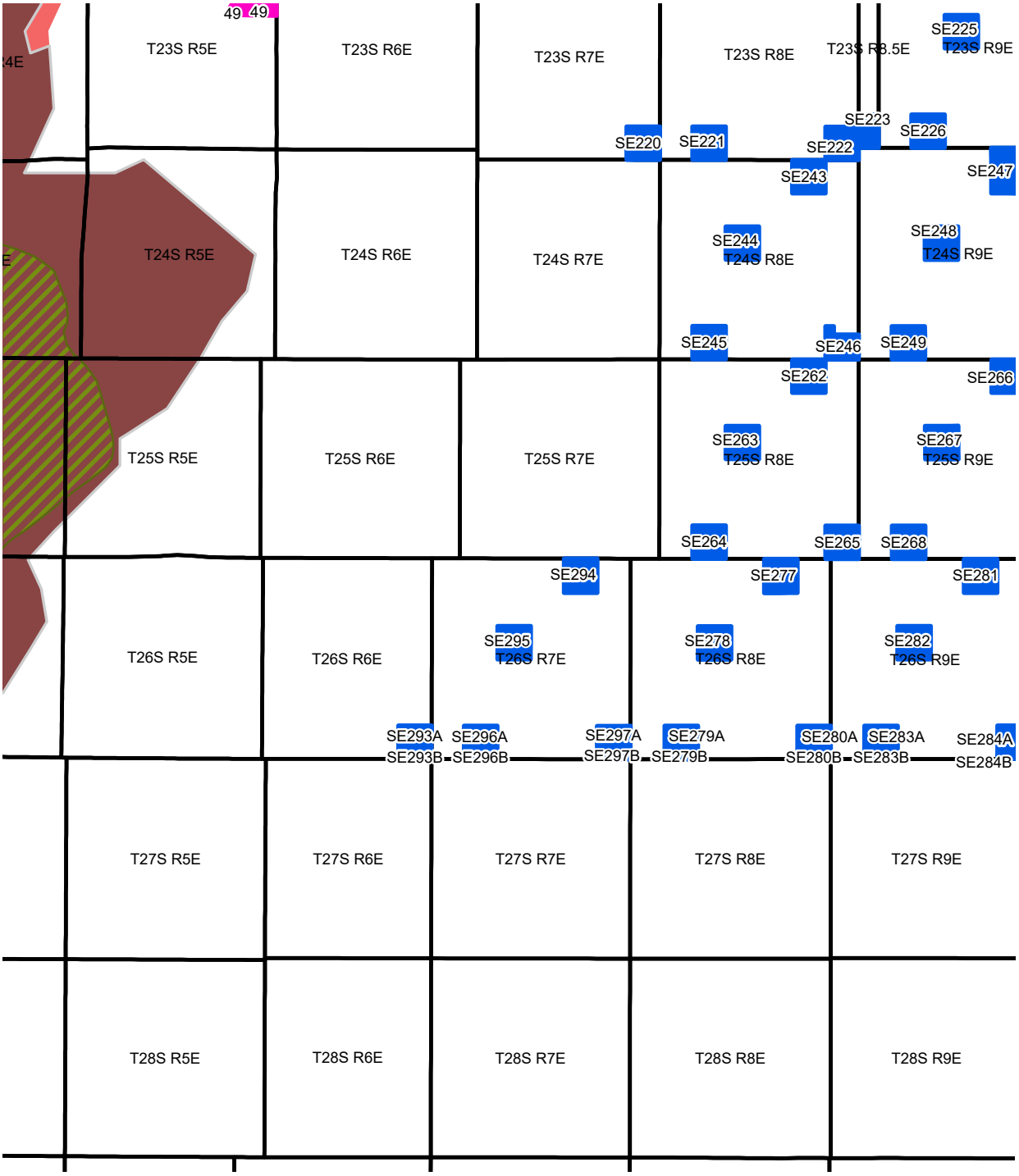
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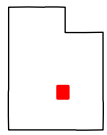
Utah SGMA Boundaries
- 2015 General Habitat Management Area
- 2015 Priority Habitat Management Area

BLM and SITLA Parcel Disposition
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- Equalization parcel

Utah SGMA Boundaries
- Bald Hills

Habitat Designation for Greater sage-grouse Map







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Parcel on Current Page						
49	SE225	SE247	SE265	SE279A	SE283A	SE294
SE220	SE226	SE248	SE266	SE279B	SE283B	SE295
SE221	SE243	SE249	SE267	SE280A	SE284A	SE296A
SE222	SE244	SE262	SE268	SE280B	SE284B	SE296B
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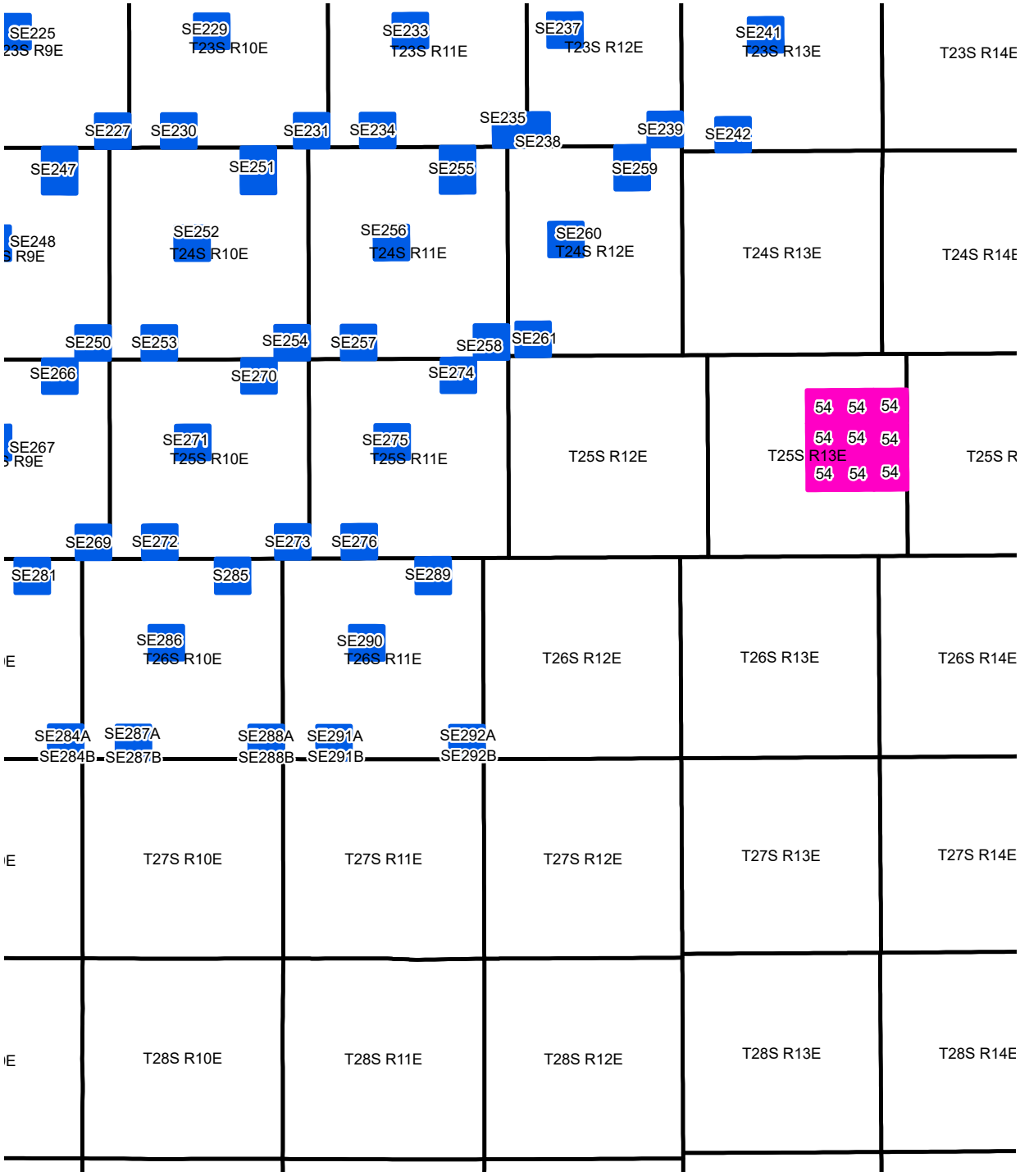
Utah SGMA Boundaries
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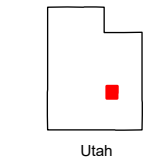
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Utah SGMA Boundaries
- Parker Mountain-Emery

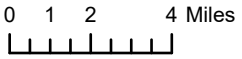
Population Area
- Emery

Habitat Designation for Greater sage-grouse Map











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August 17, 2023

Parcel on Current Page	SE230	SE238	SE250	SE256	SE266	SE273	SE284B	SE289
54	SE231	SE239	SE251	SE257	SE267	SE274	SE286	SE290
S285	SE233	SE241	SE252	SE258	SE269	SE275	SE287A	SE291A
SE225	SE234	SE242	SE253	SE259	SE270	SE276	SE287B	SE291B
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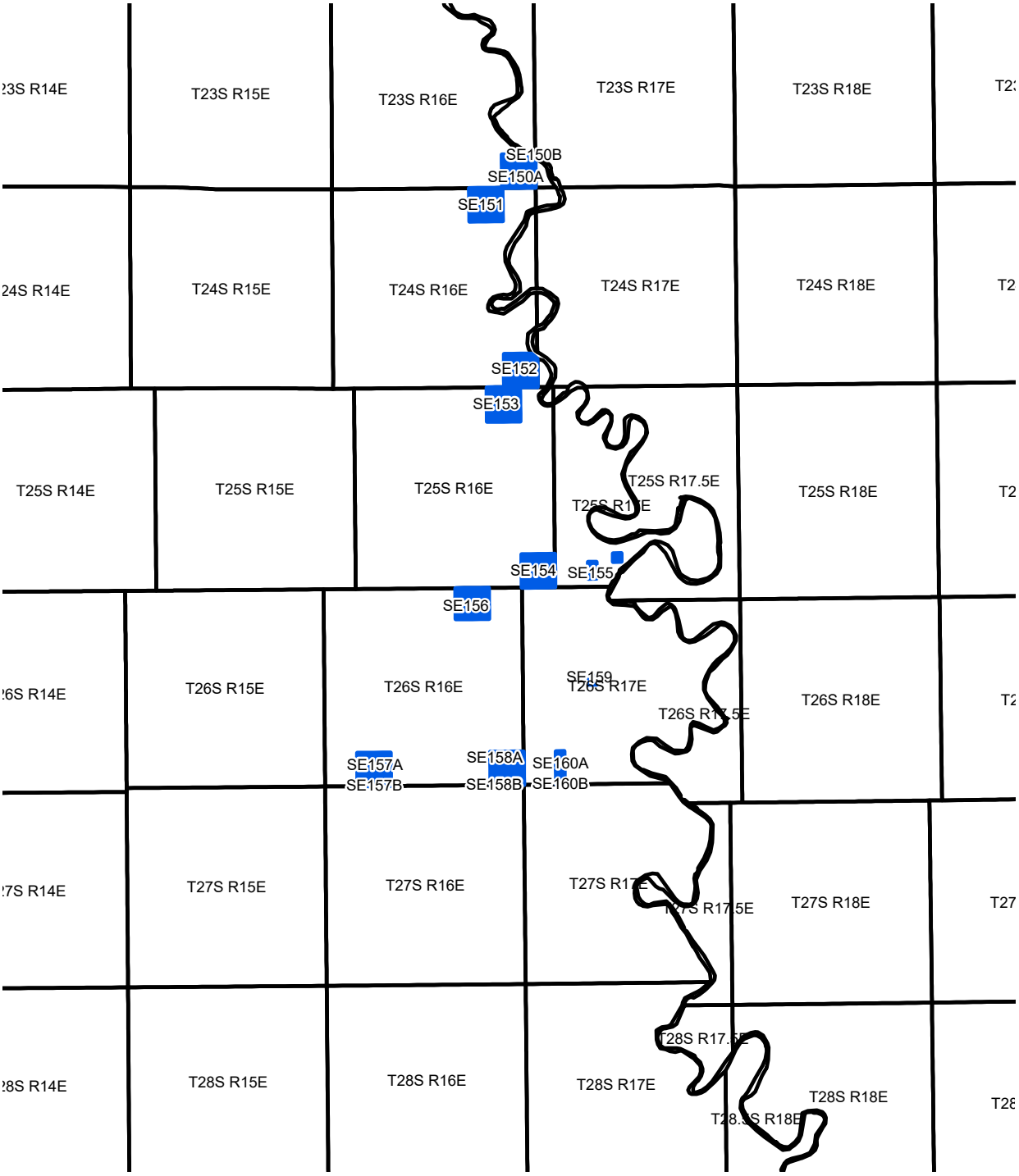
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Habitat Designation for Greater sage-grouse Map



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Parcel on Current Page			
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	SE155	SE158A	SE160B

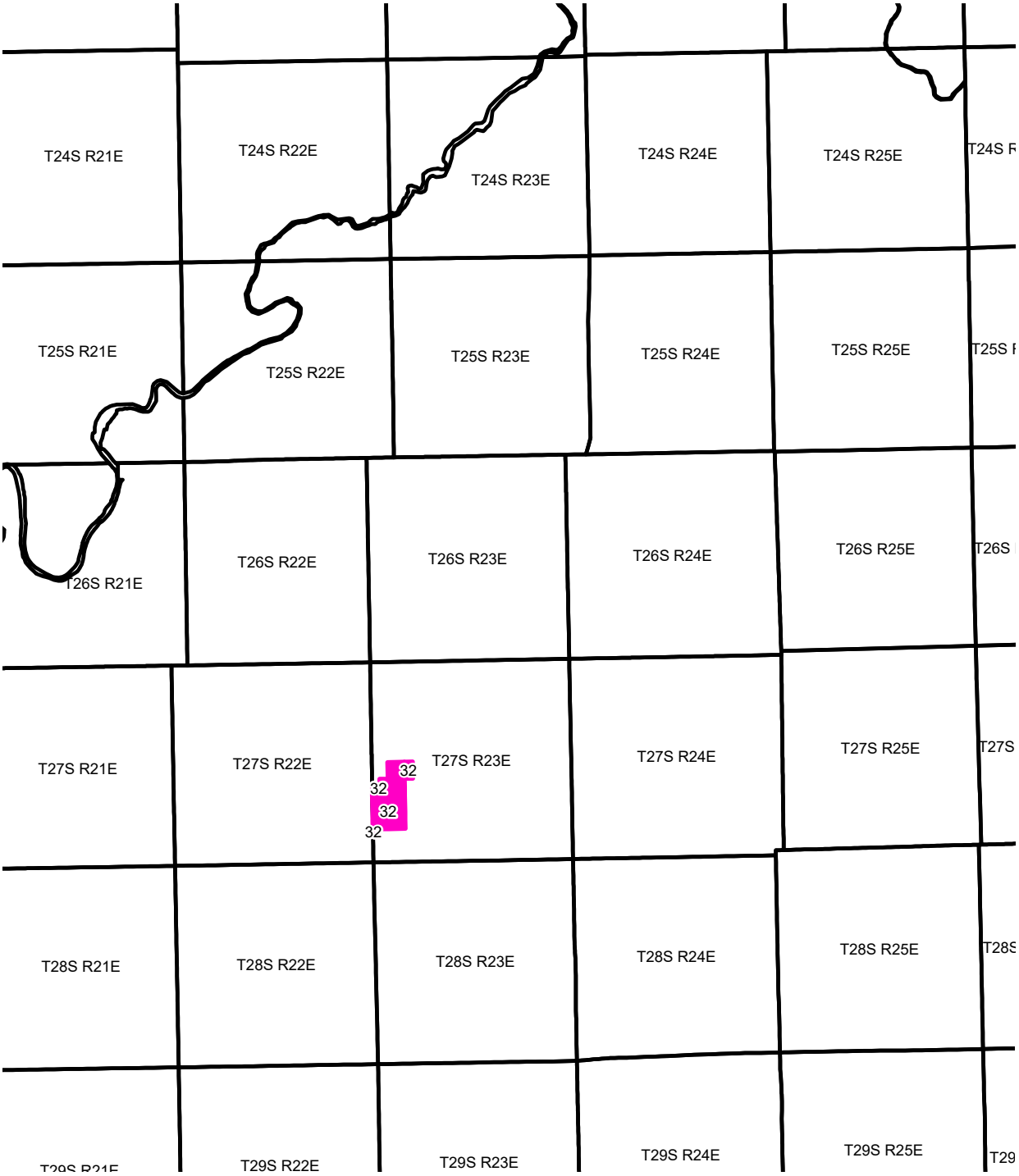
Utah SGMA Boundaries

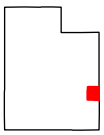
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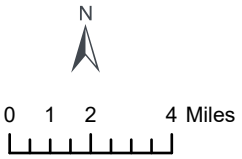
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Habitat Designation for Greater sage-grouse Map







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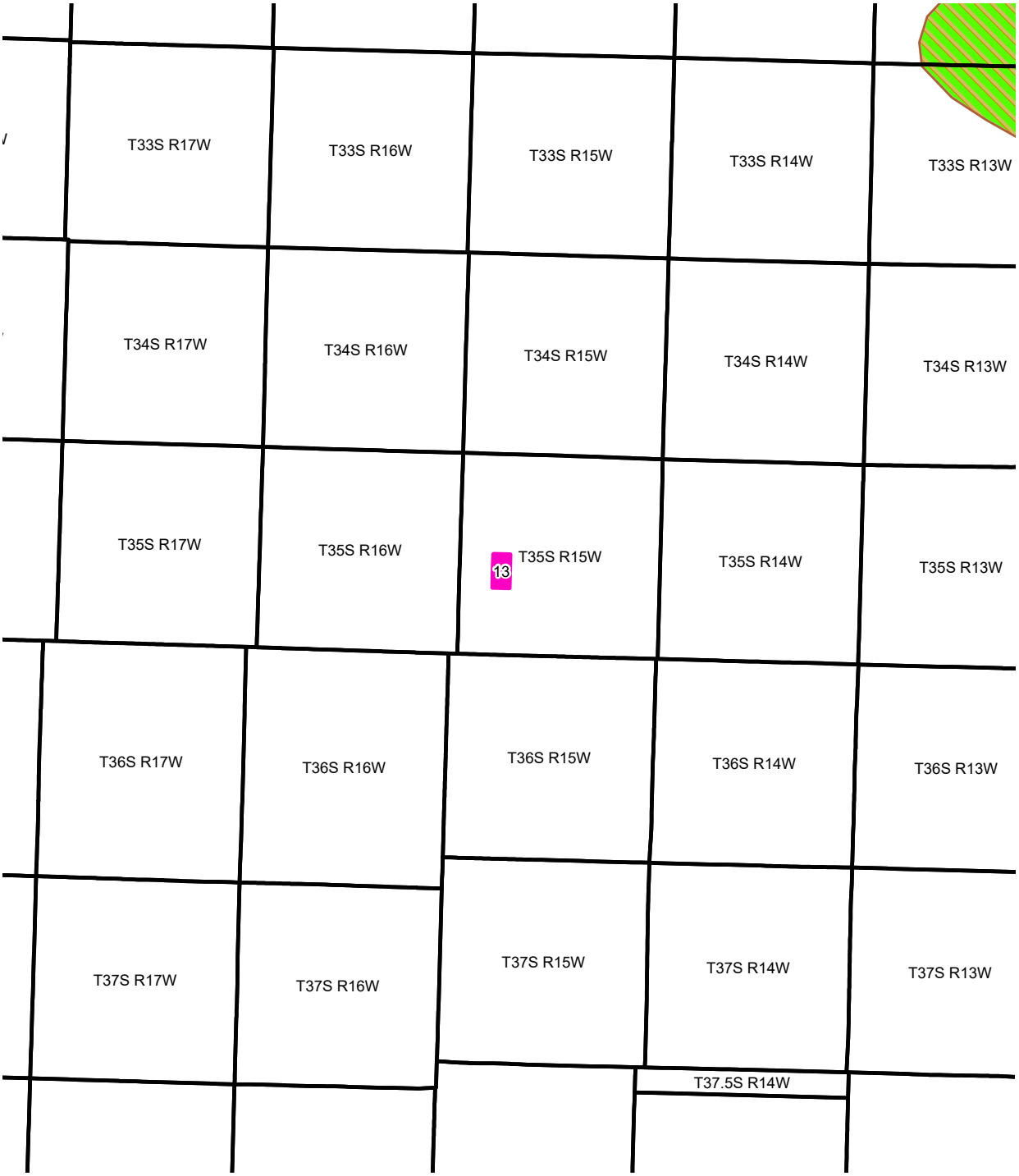
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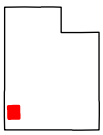
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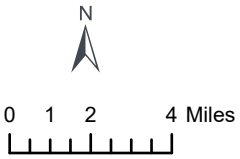
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Habitat Designation for Greater sage-grouse Map







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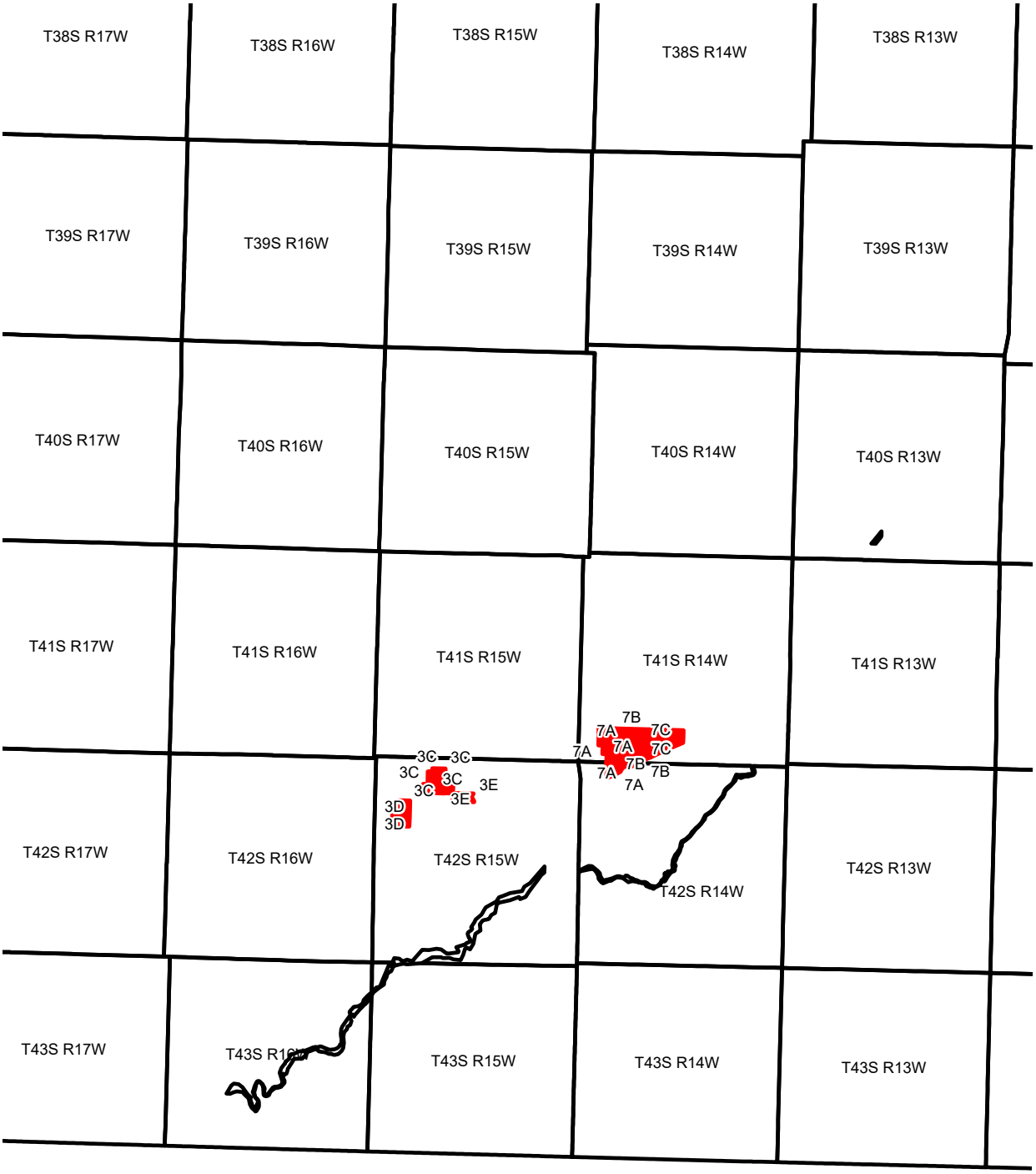
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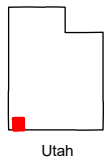
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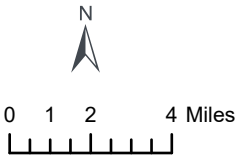
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Utah SGMA Boundaries
- Bald Hills

Habitat Designation for Greater sage-grouse Map









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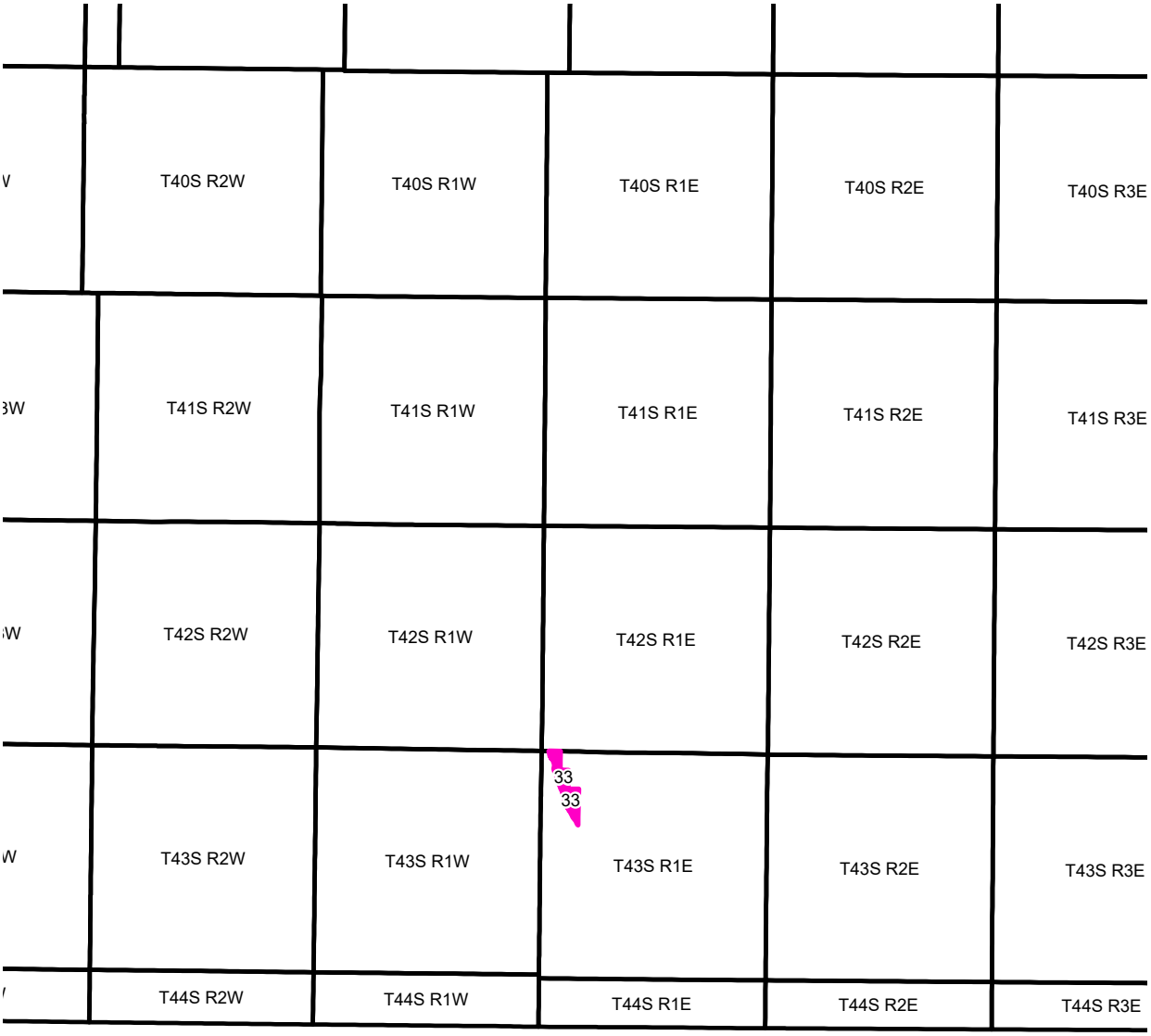
Utah SGMA Boundaries

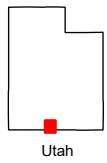
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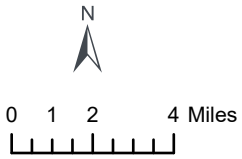
BLM and SITLA Parcel Disposition

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Habitat Designation for Greater sage-grouse Map







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August 17, 2023

Parcel on Current Page
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Utah SGMA Boundaries
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Table 7. Utah Partners in Flight Priority Species.[1]

PRIORITY SPECIES	IA[2]	RA	BD	WD	TB[2]	TN	PT[2]	PU	UTPIF SUM[1]	1^0 BREEDING HABITAT	2^0 BREEDING HABITAT	WINTERING HABITAT
Lewis's Woodpecker	3	4	4	4	4	4	5	8	40	Ponderosa Pine	Lowland Riparian	Oak
Abert's Towhee	2	3	5	5	5	5	4	8	40	Lowland Riparian	Lowland Riparian	Lowland Riparian
American Avocet	5	2	3	4	4	4	3	6	37	Wetland	Playa	Migrant
Le Conte's Thrasher[3]	2	5	5	5	4	4	3	8	37	Low Desert Scrub	Low Desert Scrub	Low Desert Scrub
Mountain Plover	2	5	5	4	4	4	3	7	36	High Desert Scrub	High Desert Scrub	Migrant
Lucy's Warbler	2	2	5	5	5	4	3	8	36	Lowland Riparian	Low Desert Scrub	Migrant
Sage-grouse[4]	3	4	3	3	4	4	4	8	36	Shrubsteppe	Shrubsteppe	Shrubsteppe
American White Pelican	5	3	3	3	4	3	3	7	36	Water	Wetland	Migrant
Bobolink	2	4	3	4	5	3	4	8	36	Wet Meadow	Agriculture	Migrant
Virginia's Warbler	4	4	4	5	3	3	3	3	36	Oak	Pinyon-Juniper	Migrant
Gray Vireo	4	4	4	5	3	3	3	6	36	Pinyon-Juniper	Oak	Migrant
Bell's Vireo	2	4	3	4	5	4	3	8	35	Lowland Riparian	Lowland Riparian	Migrant
Black Rosy-Finch	5	3	5	5	2	2	3	8	35	Alpine	Alpine	Grassland
Long-billed Curlew	2	3	4	4	4	3	4	6	34	Grassland	Agriculture	Migrant
Sharp-tailed Grouse	2	4	3	3	4	4	4	8	34	Shrubsteppe	Grassland	Shrubsteppe
Brewer's Sparrow	3	2	4	3	4	3	4	4	34	Shrubsteppe	High Desert Scrub	Migrant
Black Swift	2	5	5	4	3	4	3	??	34	Lowland Riparian	Cliff	Migrant
Black-necked Stilt	3	3	4	3	4	4	3	6	34	Wetland	Playa	Migrant
Broad-tailed Hummingbird	3	2	4	4	3	3	4	5	33	Lowland Riparian	Mountain Riparian	Migrant
Ferruginous Hawk	3	4	3	3	4	3	3	6	33	Pinyon-Juniper	Shrubsteppe	Grassland
Brown-crested Flycatcher[3]	2	5	5	2	4	3	3	8	33	Lowland Riparian	Low Desert Scrub	Migrant
Bendire's Thrasher[3]	2	4	5	5	3	3	3	7	33	Low Desert Scrub	Low Desert Scrub	Migrant
Black-tailed Gnatcatcher[3]	2	4	5	5	3	3	3	3	33	Low Desert Scrub	Lowland Riparian	Low Desert Scrub
Common Black-Hawk[3]	2	5	3	3	4	3	3	8	32	Lowland Riparian	Lowland Riparian	Migrant
Yellow-billed Cuckoo	3	3	2	3	4	4	3	8	32	Lowland Riparian	Agriculture	Migrant
Black-throated Gray Warbler	3	3	4	4	3	3	3	3	32	Pinyon-Juniper	Mountain Shrub	Migrant
Grasshopper Sparrow[3]	2	4	2	3	4	3	4	8	32	Grassland	Grassland	Migrant
Three-toed Woodpecker	4	2	2	3	4	3	3	8	32	Sub-Alpine Conifer	Lodgepole Pine	Sub-Alpine Conifer
Sage Sparrow	3	3	4	4	3	3	3	2	32	Shrubsteppe	High Desert Scrub	Low Desert Scrub
Gambel's Quail	3	3	4	4	3	3	3	8	32	Low Desert Scrub	Lowland Riparian	Low Desert Scrub
Cordilleran Flycatcher[5]	3	3	4	4	3	3	3	6	32	Sub-Alpine Conifer	Mountain Riparian	Migrant
Gray Flycatcher[6]	4	3	4	4	3	3	2	7	32	Pinyon-Juniper	High Desert Scrub	Migrant
Spotted Owl (Mexican)[7]	2	5	4	4	3	3	3	8	32	Cliff	Lowland Riparian	Cliff

1 All species which had a ranking sum greater than 31 were considered for the final list. Utah Partners in Flight Priority species for conservation action appear in bold type. Removal of species from the final list are given below. Those species not considered as priority species were at least partially represented by priority species that require the same habitat type.

2 Importance of Area (IA), Threats to Breeding Habitat (TB), and Population Trend (PT) were considered to be more important ranking factors and were weighted more heavily than other factors in calculating final scores. The values of these three factors were therefore doubled in the revised final rankings (UTPIF SUM). Also, PU was not in included in scores, as it was used primarily as a qualifier for the other scores.

3 Species removed from the final list because of limited distribution or low abundance in Utah combined with relatively wide distribution or high abundance in the portion of its range outside of Utah (i.e., Utah is not particularly important to species as a whole).

4 Sage-grouse includes Greater and Gunnison species

5 Species removed from the final list because it is common in Utah and other portions of its range and does not have a significant declining population trend.

6 Species removed from the final list because it is common in Utah and other portions of its range and has a significant increasing population trend.

7 Species removed from the final list because it is federally listed as Threatened and has a Recovery Plan which is currently being implemented in Utah and across its range.

Table 7.
Birds of Conservation Concern 2021 designated within BCRs 9, 16, 33, 34, 35 and 36. See Table 2 for descriptions of BCRs. Scientific names of species, subspecies and populations are provided in Appendix 1. Breeding (X) and nonbreeding (nb) status are indicated for each BCR; breeding BCRs may also support passage or wintering birds.

Taxon Common Name	BCR/MBCR					
	9	16	33	34	35	36
Western Grebe	X	X	X	X		
Clark's Grebe	X	X	X		X	
Common Nighthawk (Henry's)					X	
Mexican Whip-poor-will				X	X	
Black Swift	X	X				
Chimney Swift						X
Lucifer Hummingbird					X	
Costa's Hummingbird			X			
Calliope Hummingbird	X					
Rufous Hummingbird	X					
Broad-tailed Hummingbird	X	X		X	X	
King Rail						X
Yellow Rail	X					
American Avocet	X		X			
American Golden-Plover						nb
Wilson's Plover						X
Mountain Plover		X	nb		nb	nb
Snowy Plover (Interior/Gulf Coast)	X	X	X		X	X
Long-billed Curlew					nb	nb
Marbled Godwit	nb		nb			
Red Knot (Pacific)	nb					
Buff-breasted Sandpiper						nb
Pectoral Sandpiper	nb	nb				nb
Lesser Yellowlegs	nb	nb				nb
Willet	X		nb			
Franklin's Gull	X					
Yellow-footed Gull			nb			
California Gull	X	X				
Gull-billed Tern			X			X
Black Tern	X					
Forster's Tern	X					
Black Skimmer			X			
American White Pelican	X					
Northern Harrier	X					
Harris's Hawk						X
Ferruginous Hawk					X	
Flammulated Owl	X	X		X	X	
Whiskered Screech-Owl				X		
Burrowing Owl (Western)			X		X	
Long-eared Owl	X	X	X	X		
Short-eared Owl	X	X				

Taxon Common Name	BCR/MBCR					
	9	16	33	34	35	36
Elegant Trogon				X		
Lewis's Woodpecker	X	X		X		
Gila Woodpecker			X			
Arizona Woodpecker				X		
Gilded Flicker			X	X		
Olive-sided Flycatcher	X	X		X		
Cordilleran Flycatcher				X		
Black-capped Vireo					X	
Plumbeous Vireo				X		
Pinyon Jay	X	X	X	X	X	
Woodhouse's Scrub-Jay (Woodhouse's)					X	
Clark's Nutcracker		X				
Chihuahuan Raven						X
Mexican Chickadee				X		
Verdin (Southwest)			X			
Cactus Wren (Speckled)					X	
Curve-billed Thrasher (Palmer's))			X			
Curve-billed Thrasher (Brownsville)						X
Bendire's Thrasher	X	X	X	X	X	
California Thrasher			X			
LeConte's Thrasher			X			
Sage Thrasher	X					
Phainopepla (Southwest)				X		
Sprague's Pipit				nb	nb	nb
Evening Grosbeak	X	X		X	X	
Black Rosy-Finch	X	X				
Brown-capped Rosy-Finch		X				
Cassin's Finch	X	X				
Cassia Crossbill	X					
Lawrence's Goldfinch			X			
Chestnut-collared Longspur				nb	nb	nb
Thick-billed Longspur					nb	
Rufous-winged Sparrow			X	X		
Cassin's Sparrow					X	
Black-chinned Sparrow		X	X	X	X	
Baird's Sparrow				nb	nb	
Yellow-headed Blackbird		X				
Bobolink	X					
Eastern Meadowlark					X	X
Orchard Oriole						X
Scott's Oriole				X	X	
Tricolored Blackbird			X			
Colima Warbler					X	
Virginia's Warbler	X	X		X	X	
Grace's Warbler		X	X	X	X	

Taxon Common Name	BCR/MBCR					
	9	16	33	34	35	36
Black-throated Gray Warbler				X		
Red-faced Warbler				X		
Pyrrhuloxia			X	X	X	X
Varied Bunting				X	X	
Painted Bunting						X
Totals	34	25	27	30	30	20

Table 8.
Birds of Conservation Concern 2021 designated within BCRs 11, 17, 18, 19, 20, 21, 37 and MBCR 20. See Table 2 for descriptions of BCRs and MBCRs. Scientific names of species, subspecies and populations are provided in Appendix 1. Breeding (X) and nonbreeding (nb) status are indicated for each BCR/MBCR; breeding BCRs may also support passage or wintering birds.

Taxon Common Name	BCR/MBCR							
	11	17	18	19	20	21	37	M20
Western Grebe	X	X		X				
Clark's Grebe	X		X					
Black-billed Cuckoo	X	X		X				
Eastern Whip-poor-will	X							
Chimney Swift	X		X	X	X	X	X	
Broad-tailed Hummingbird			X					
King Rail				X			X	
Yellow Rail	X						nb	
American Oystercatcher							X	
American Golden-Plover	nb			nb	nb	nb	nb	
Wilson's Plover							X	
Mountain Plover	X	X	X	nb	nb	nb	nb	
Snowy Plover (Interior/Gulf Coast)			X	X			X	
Whimbrel			nb	nb			nb	
Long-billed Curlew	X		X		nb	nb	nb	
Hudsonian Godwit	nb		nb	nb			nb	
Marbled Godwit	X	X					nb	
Ruddy Turnstone (Atlantic)	nb						nb	
Red Knot (Pacific)							nb	
Dunlin (Hudson Bay)	nb						nb	
Buff-breasted Sandpiper	nb		nb	nb	nb	nb	nb	
Pectoral Sandpiper	nb		nb	nb	nb	nb	nb	
Short-billed Dowitcher	nb						nb	
Lesser Yellowlegs	nb	nb	nb	nb	nb	nb	nb	
Willet	X	X		X			X	
Franklin's Gull	X	X						
California Gull	X	X						
Least Tern (Atlantic/Interior)				X		X	X	
Gull-billed Tern							X	
Black Tern	X	X		X				
Forster's Tern							X	

Table 6.
Birds of Conservation Concern 2021 designated within BCRs 5, 10, 15, 32 and MBCR 17. See Table 2 for descriptions of BCRs and MBCRs. Scientific names of species, subspecies and populations are provided in Appendix 1. Breeding (X) and nonbreeding (nb) status are indicated for each BCR or MBCR; breeding BCRs may also support passage or wintering birds.

Taxon Common Name	BCR/MBCR				
	5	10	15	32	M17
Western Grebe	X	X	X	X	
Clark's Grebe	X	X	X	X	
Black Swift	X	X	X	X	
Vaux's Swift	X				
Calliope Hummingbird		X	X		
Rufous Hummingbird	X	X			
Allen's Hummingbird	X			X	
Broad-tailed Hummingbird		X			
Yellow Rail		X		nb	
Black Oystercatcher	X			X	
Mountain Plover		X		nb	
Snowy Plover (Interior/Gulf Coast)				X	
Marbled Godwit	nb			nb	
Red Knot (Pacific)	nb			nb	
Rock Sandpiper (Pribilof)	nb				
Short-billed Dowitcher	X			nb	
Lesser Yellowlegs	nb	nb			
Willet	nb	X	X	nb	
Marbled Murrelet (Alaska)	X				
Kittlitz's Murrelet	X				
Scripps's Murrelet				X	nb
Guadalupe Murrelet					nb
Craveri's Murrelet					nb
Ancient Murrelet	X				
Cassin's Auklet	X				
Tufted Puffin	X				nb
Franklin's Gull		X			
Heermann's Gull				X	
Western Gull	X			X	
California Gull	X	X	X	X	
Aleutian Tern	X				
Gull-billed Tern				X	
Black Tern		X		X	
Elegant Tern				X	
Black Skimmer				X	
Laysan Albatross					nb
Black-footed Albatross					nb
Ashy Storm-Petrel				X	nb
Black Storm-Petrel				X	nb
Murphy's Petrel					nb
Cook's Petrel					nb

Taxon Common Name	BCR/MBCR				
	5	10	15	32	M17
Buller's Shearwater					nb
Pink-footed Shearwater					nb
Black-vented Shearwater					nb
Brandt's Cormorant	X			X	
Red-faced Cormorant	X				
Northern Harrier				X	
Flammulated Owl	X	X	X	X	
Western Screech-Owl (Northern Pacific)	X			X	
Burrowing Owl (Western)				X	
Spotted Owl (California)			X	X	
Long-eared Owl		X	X	X	
Short-eared Owl				X	
Lewis's Woodpecker		X	X		
Williamson's Sapsucker (Rocky Mountain)		X			
Nuttall's Woodpecker				X	
White-headed Woodpecker (California)				X	
Olive-sided Flycatcher	X	X	X	X	
Pinyon Jay		X	X	X	
Island Scrub-Jay				X	
Yellow-billed Magpie				X	
Chestnut-backed Chickadee (Northern)	X				
Oak Titmouse	X		X	X	
White-breasted Nuthatch (Slender-billed)	X				
American Dipper			X		
Wrentit	X		X	X	
Varied Thrush (Pacific)	X				
California Thrasher			X	X	
LeConte's Thrasher				X	
Evening Grosbeak	X	X	X		
Black Rosy-Finch		X			
Cassin's Finch	X	X	X	X	
Lawrence's Goldfinch			X	X	
Thick-billed Longspur		X			
Black-chinned Sparrow				X	
Vesper Sparrow (Oregon)	X				
Savannah Sparrow (Belding's)				X	
Song Sparrow (Alameda/Samuels)				X	
Song Sparrow (Channel Island)				X	
Bobolink		X			
Bullock's Oriole				X	
Tricolored Blackbird				X	
Common Yellowthroat (San Francisco)				X	
Black-throated Gray Warbler			X		
Hermit Warbler			X		
Totals	34	24	21	49	13

Appendix H Response to Draft EA Comments

September 2023

As detailed in Table H-1, the BLM assigned unique codes for all individuals, entities, and organizations who submitted comments during the Draft EA comment period. The BLM evaluated all comments received and parsed them into substantive or non-substantive comments according to the guidance in the BLM's NEPA Handbook (H-1790-1; page 66). The agency then identified categories for each of the substantive comments. The commenter codes and categories are used in Tables H-1 and H-2 for responding to all substantive comments. Substantive comments contained in Tables H-1 and H-2 are representative of topics raised, and single responses are provided for similarly stated comments.

Substantive comments 1) question, with reasonable basis, the accuracy of the information in the analysis; 2) question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the analysis; 3) present new information relevant to the analysis; 4) present reasonable alternatives other than those analyzed; or 5) cause changes or revisions in one or more of the alternatives.

Non-substantive comments generally 1) expressed opposition to or support for the proposed action or alternatives or agreed or disagreed with BLM policy or resource decisions without reasoning, justification, or supporting data; 2) did not pertain to the project area or the project; or 3) took the form of vague or open-ended questions and did not warrant a specific response. Similarly, comments that merely cited other comments or sources without providing reasoning or additional explanation were considered non-substantive. Specific non-substantive comments received consisted of

- an open-ended question regarding the purpose of public input on the land exchange;
- a request that SITLA minimize future action impacts, without additional details or explanation;
- a request for contact information for a cooperating agency (SITLA);
- general opposition to the proposed land exchange;
- general support for the proposed land exchange, as well as support for the transfer of specific BLM, SITLA, and equalization parcels; and
- a request that the BLM incorporate all previous comments by reference.

While the BLM does not provide specific responses to each of these comments because they do not meet the criteria for being substantive, the agency thanks these commenters for their feedback.

Table H-1. Public Submissions with Assigned Commenter Codes and Comment Categories

Commenter Code	Commenter Name, Title	Organization	Commenter Categories
Individuals			
I-01	Shawn Hanka	Not provided	Non-substantive; Alternatives Considered but Dismissed from Detailed Analysis
I-02	Withheld	Not provided	Non-substantive
I-03	Caroyln Borg	Not provided	Non-substantive
I-04	Jay Gatten	Not provided	Non-substantive
I-05	Richard Spotts	Not provided	Non-substantive; Wetland Analysis

Commenter Code	Commenter Name, Title	Organization	Commenter Categories
I-06	Withheld	Not provided	Alternatives Considered but Dismissed from Detailed Analysis
		Government	
G-01	Jim Jennings, Emery County Public Lands Administrator	Emery County	Non-substantive
G-02	Priscilla Burton	Utah Division of Oil, Gas and Mining	Soil Resources
G-03	Redge Johnson	Utah Public Lands Policy Coordinating Office	Non-substantive
		Non-Governmental Organization	
N-01	Landon Newell	Southern Utah Wilderness Alliance	Wetland Analysis; Alternatives Considered but Dismissed from Detailed Analysis; BLM Parcels 46 to 48 Coal Leasing; Section 7 Consultation; Reasonably Foreseeable Impacts; Legal Protection; Cumulative Impacts – General; Cumulative Impacts – Water Use; Indirect GHG Emissions; ESA-Listed Plant Species; ESA-Listed and Candidate Wildlife; Historic Properties
N-02	Karla VanderZanden	Canyonlands Field Institute	Non-substantive

Table H-2. BLM Response to Substantive Comments

Commenter Code	BLM Comment Categories and Summaries	BLM Response
I-05, N-01	**Wetland Analysis** The BLM should revise the EA analysis to reflect the May 25, 2023, United States Supreme Court decision to restrict the type, nature, and scope of waters in the United States, including wetlands and riparian areas, that qualify as WOTUS and otherwise are subject to CWA protections.	Sections 3.21.1.2 and 3.21.2 of the EA were revised to incorporate information and analysis based on the ruling in *Sackett v. United States*.
G-02	**Soil Resources** The BLM should incorporate the following study into the EA: Long, R.E. 2020. Evaluation of Soil Erosion Potential in the Walker Flat LBA Study Area. Long Resource Consultants, Inc., Morgan, Utah 84050.	Section 3.16.1.1 of the EA was revised to include this information.
N-01	**BLM Parcels 46 to 48 Coal Leasing** The BLM should not assume that BLM parcels 46-48 (including 46C) will still be leased and developed for coal and thus the foreseeable impacts are the same (or similar) because coal mining and its downstream and cumulative impacts will occur under either scenario because of the existing coal lease moratorium.	Section 2.2 of the EA was revised to include consideration of a scenario in which the coal moratorium continues indefinitely. The No Action analyses in Sections 3.2 to 3.24 were also updated to address potential resource impacts if the federal coal leasing moratorium continues indefinitely.
N-01	**Section 7 Consultation** The BLM should formally consult with USFWS to comply with the ESA, and revise EA analysis based on the USFWS's biological opinion prior to issuing a final decision on the proposed land exchange.	Table 4.1 in Section 4.1 of the EA was updated to provide additional information on the ESA Section 7 consultation process. (Edit is pending completion of consultation process)
N-01	**Reasonably Foreseeable Impacts** The BLM should provide further justification to demonstrate that impacts on BLM parcels will be the same upon conveyance to SITLA.	The BLM has revised Chapter 3 of the EA to provide specific effect determinations with rationale, as appropriate.

Commenter Code	BLM Comment Categories and Summaries	BLM Response
N-01	**Legal Protection** The BLM should provide further justification that the legal requirements governing SITLA provide the same level of environmental protections as those that apply to BLM.	The EA discloses potential changes to considered resources based on regulatory requirements that may differ between the BLM and SITLA. No change was made to the EA. However, a more detailed response regarding cultural resource regulatory requirement differences between BLM and SITLA is provided below.
I-01; I-06; N-01	**Alternatives Considered but Dismissed from Detailed Analysis** The BLM should evaluate: • A Climate Pollution Reduction alternative. • A Lands with Wilderness Characteristics alternative. • A Threatened and Endangered Plants alternative.	The EA was revised to consider these alternatives in Section 2.3.4.
N-01	**Cumulative Impacts - General** The BLM should provide additional quantification and more detailed cumulative analysis of other reasonably foreseeable projects in the EA.	Cumulative impacts analysis in Sections 3.2 to 3.24 of the EA was revised, where applicable, to include quantification of other reasonably foreseeable project impacts.
N-01	**Cumulative Impacts – Water Use** The BLM should quantify existing levels of water use, quantify water use of foreseeable projects, and analyze and disclose the cumulative impact of this water use to the environment.	Section 3.20 of the EA was revised to include additional information on current water use and water use impacts associated with reasonably foreseeable projects.
N-01	**Indirect GHG Emissions** The BLM should revise the GHG emission equivalencies for BLM parcels 46–48.	Section 3.2.2 of the EA was revised to correct GHG emission equivalencies for BLM parcels 46–48.

Commenter Code	BLM Comment Categories and Summaries	BLM Response
N-01	**ESA-Listed Plant Species** The BLM should provide a more detailed analysis of reasonably foreseeable future land use impacts to listed or candidate plant species, as well as consider cumulative impacts to species' listing status and species' recovery.	The BLM acknowledges the commenter's request for additional detailed analysis. However, field surveys to determine presence or absence of species have not been conducted for the land exchange. Therefore, the EA provides a worst-case analysis of potential impacts by reporting acres of range that intersect or overlap parcels for each individual species. Suitable habitat is not likely to be present on all acres within a given species' range; therefore, the actual magnitude of impact is likely to be lower than reported in the EA. To supplement the current EA analysis, Section 3.18 was revised to include a qualitative discussion of reasonably foreseeable project impacts to specific species based on current literature and other relevant documents. The EA currently acknowledges that impacts to current or future threatened, endangered, and candidate plant species could occur on BLM parcels, if present, because SITLA is not obligated to apply protective management of threatened, endangered, and candidate plant species on state trust lands. Habitat for these species also exists outside of the affected parcels; therefore, the land exchange may affect, but is not likely to adversely affect plant species with potential to occur on BLM parcels.
N-01	**ESA-Listed and Candidate Wildlife** The BLM should provide a more detailed analysis of reasonably foreseeable future land use impacts to listed or candidate wildlife species.	The BLM acknowledges the commenter's request for additional detailed analysis. However, field surveys to determine presence or absence of species have not been conducted for the land exchange. Therefore, the EA provides a worst-case analysis of potential impacts by reporting acres of range that intersect or overlap parcels for each individual species. Suitable habitat is not likely to be present on all acres within a given species' range; therefore, the actual magnitude of impact is likely to be lower than reported in the EA. To supplement the current EA analysis, Section 3.23 was revised to include a qualitative discussion of reasonably foreseeable project impacts to specific species based on current literature and other relevant documents.

Commenter Code	BLM Comment Categories and Summaries	BLM Response
N-01	**Historic Properties** The BLM should address potential adverse effects to historic properties on lands that will be transferred to SITLA, with a particular focus on 1) whether Utah Code§ 9-8a-404 nor Utah Executive Order 13007 constitute "adequate and legally enforceable restrictions or conditions to ensure long-term preservation of [historic properties]", and 2) the lack of provision requiring SITLA consultation with Native American Tribes that attach religious or cultural significance to historic properties.	The BLM has determined that it has met its obligations with regard to Section 106 consultation and disclosure for this EA. Cultural resource consultation was conducted in full accordance with the 2012 State Protocol Agreement, which directs how the BLM will meet its responsibilities under the NHPA, as amended, by describing how the Utah SHPO and the BLM will interact and cooperate. The BLM's consultation process and SHPO concurrence with the BLM's finding of "No Adverse Effect" for this undertaking are disclosed in Section 1.4 and Section 4.1 of the EA. This finding was based on the determination that all transferred historic properties will be now under the purview of Utah Code Annotated, 9-8-404 which the Utah SHPO recognizes as a legally enforceable protection in reference to 36 CFR 800.5. Therefore, the BLM maintains its determination that the Proposed Action would have no adverse effect to historic properties. Reference to the Utah Executive Order was removed from the EA. The BLM has engaged with potentially affected Tribes throughout the planning process (see Section 4.1 in EA). No specific concerns, whether related to properties of cultural or religious importance or other resources of concern, have been identified by Tribes as part of this government-to-government consultation on parcels leaving federal management or those lands entering federal management. The BLM will continue to consult with Tribes regarding this exchange, and until such time as the exchange has been finalized, the BLM remains committed to engaging with Tribes and addressing any concerns they bring forward. Future actions on lands acquired by the BLM will be subject to Tribal consultation as appropriate.