

U.S. Department of the Interior  
Bureau of Land Management

January 2026

## San Rafael Swell Desert Bighorn Sheep Capture

Environmental Assessment

DOI-BLM-UT-G020-2026-0010-EA

Emery County, UT:  
*Muddy Creek Wilderness*  
*San Rafael Reef Wilderness*  
*Mexican Mountain Wilderness*  
*Cold Wash Wilderness*  
*Eagle Canyon Wilderness*  
*Devil's Canyon Wilderness*  
*Sid's Mountain Wilderness*

*I have considered the factors mandated by the National Environmental Policy Act (NEPA). This environmental assessment represents the Bureau of Land Management's (BLM's) good-faith effort to fulfill NEPA's requirements by prioritizing documentation of the most important relevant considerations within the statutorily mandated page limits and timeline. This prioritization reflects the BLM's expert judgment; and any considerations addressed briefly or left unaddressed are, in the BLM's judgment, comparatively non-substantive and would not meaningfully inform the BLM's consideration of environmental effects and the decision to be made. The EA is substantially complete, considers the factors mandated by NEPA, and, in my judgment, contains analysis adequate to inform the BLM's decision regarding the proposed action.*

Responsible Official: \_\_\_\_\_

Date: \_\_\_\_\_

Elijah Waters, District Manager

U.S. Department of the Interior  
Bureau of Land Management  
Green River District  
Price Field Office  
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## CHAPTER 1. INTRODUCTION

### 1.1. Background

The rugged cliffs, canyons, and mesas of the San Rafael Swell support one of Utah's most important desert bighorn sheep (*Ovis canadensis nelsoni*) populations, divided by the Utah Division of Wildlife Resources (UDWR) into the North and South subunits of the San Rafael Unit (Figure 1-1, units are divided by Interstate 70)<sup>1</sup>. Historically, desert bighorn sheep lived throughout the San Rafael Swell.

Both the archaeological record and historic records of the first European settlers support that sheep were once abundant but declined beginning in the 1870s until many herds were fully extirpated by the 1950s, including those in the San Rafael Swell (UDWR 2018). Causes of decline included respiratory disease (mainly *Mycoplasma ovipneumoniae*, introduced by domestic sheep), competition with livestock for forage, unregulated hunting, and loss of forage due to fire suppression, which, along with livestock grazing, reduced the amount of native grassland. In the 1970s the UDWR began transplanting sheep to reestablish historic herds. In the 1980s and 1990s they conducted ten transplants in the San Rafael Swell that enabled the sheep population to rebound into two herds (UDWR 2018 Table 7). The herd in the North subunit was subjected to a massive die-off between 2008 and 2011 due to disease, and the one in the South subunit saw one of a smaller scale between 2015 and 2018 (UDWR 2019). As of 2018, the herds were estimated at 170 and 222, respectively. Today, with regulated hunting and closure of habitat to domestic sheep grazing, the dominant concerns to desert bighorn populations are disease, predation, and habitat degradation. Recreation can also stress sheep, and a rise in the popularity of outdoor recreation in recent decades makes its impacts on sheep an ongoing topic of scientific concern.

While herd numbers have stabilized, they are still below UDWR's objective of 500 individuals per unit, and robust monitoring is central to effective management. The UDWR conducts aerial count surveys every two to three years, live captures every five years, and ongoing ground classification and radio-collar monitoring to generate annual estimates of survival. Monitoring also includes documenting domestic-wild sheep interactions, evaluating lamb recruitment, and maintaining disease profiles for each subunit. These data inform future interagency planning and decisions about recreation management, hunting tag allocation, disease response, predator management and habitat treatments.

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<sup>1</sup> The San Rafael Unit also includes the Dirty Devil subunit, located across Highway 24 from the San Rafael Swell. The Proposed Action only affects the San Rafael North and South subunits; activities in the Dirty Devil unit would occur at another time and be under the purview of the BLM Richfield Field Office.



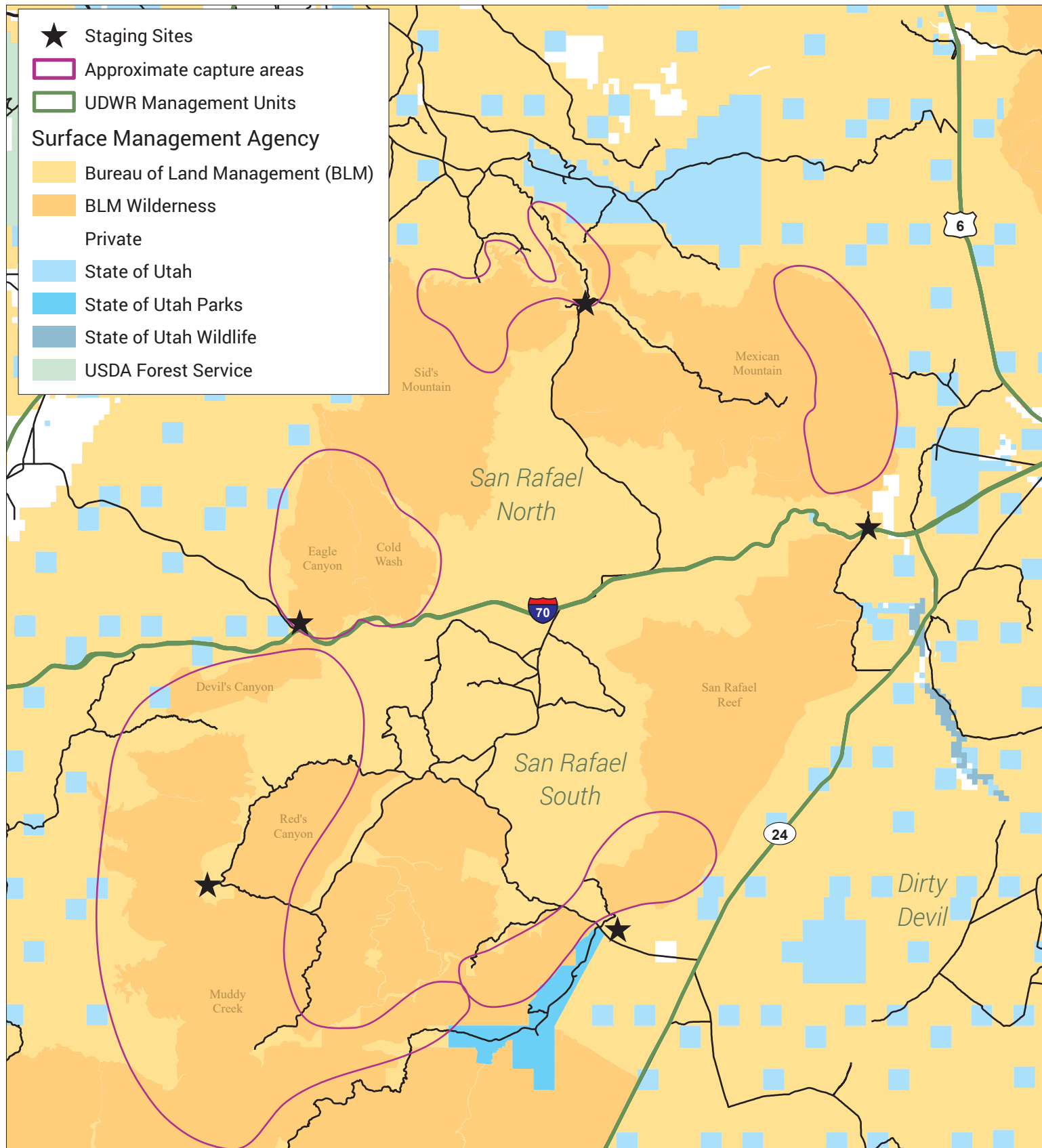
# Bighorn Sheep Capture Overview

Bureau of Land Management, Utah  
Price Field Office  
125 South 600 West  
Price, UT 84501



Locations of live capture staging areas and general zones provided by the Utah Division of Wildlife Resources.

12/3/2025



0 10 20 Miles

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.

As described in the San Rafael Bighorn Sheep Unit Management Plan (UDWR 2019), UDWR conducts live captures every five years during which they test animals for pathogens and assess general herd health. The live captures supports ongoing monitoring of disease in the San Rafael herds, particularly *Mycoplasma ovipneumoniae*, and contributes to ongoing research on herd distribution in response to stressors such as recreation. Regular disease sampling through these captures helps detect emerging herd health problems early—often before lamb recruitment collapses or adult mortality becomes widespread—allowing early interventions that can prevent long-term population declines and mitigate the need for more impactful actions like transplants. Live captures are also the time when they can fit GPS radio collars.

In 2019, the John D. Dingell Conservation, Management, and Recreation Act (Public Law 116-9) designated 14 wilderness areas in and around the San Rafael Swell. Seven of them, listed below, are partially or entirely desert bighorn sheep occupied habitat (see Figure 3-1) and thus would be the main areas where capture activities would be concentrated.

- Mexican Mountain (totaling 76,413 acres)
- Sid's Mountain (totaling 49,130 acres)
- Eagle Canyon (totaling 13,832 acres)
- Cold Wash (totaling 11,001 acres)
- Devil's Canyon (totaling 8,675 acres)
- Muddy Creek (totaling 98,023 acres)
- San Rafael Reef (totaling 60,422 acres)

## **1.2. Purpose and Need**

BLM's need is to consider and, if appropriate, authorize UDWR's San Rafael Swell Desert Bighorn Sheep Capture project to collect current biological and disease data in the San Rafael Swell herd unit (North and South subunits. BLM's purposes are to: manage public lands to protect ecological values; preserve the wilderness character of the seven wilderness areas; comply with the purposes of the San Rafael Swell Recreation Area; and cooperate with UDWR in wildlife monitoring efforts which inform wildlife management.

UDWR's objectives for the proposal are to maintain herd viability through health monitoring and disease sampling, which helps detect emerging problems for early response, and to track herd movements through GPS collaring, which helps inform conservation and management decisions.

## **1.3. Decision to be Made**

The BLM's decision is whether to approve the UDWR's request to use helicopters and GPS collars on BLM-administered lands in their desert bighorn sheep live capture project for wildlife monitoring efforts and, if so, with what stipulations.

The BLM will not make decisions for lands belonging to, or administered by, other agencies or individuals.

The BLM will not make decisions on wildlife management actions referenced in this EA which may be taken by UDWR during the live capture project, such as quarantining or euthanizing a sick sheep, because they are not within the BLM's jurisdiction.

#### **1.4. Relationship to Statutes and Regulations and Other Plans**

The following statutes and regulations are relevant to the Proposed Action:

##### **1.4.1. Wilderness Act of 1964 (Wilderness Act, 16 U.S.C. 1131)**

The Wilderness Act (16 USC 1133 §4(c)) prohibits the following activities proposed in UDWR's capture plan (UDWR 2025) except as necessary to meet minimum requirements for the administration of the area for the purpose of the Wilderness Act:

- Landing aircraft in wilderness (including bringing anything to the ground via aircraft such as a passenger, short haul, or gun net, irrespective of if the aircraft itself touches ground)
- Leaving a mobile installation in wilderness (bighorn sheep radio collars)

Because more than 70% of desert bighorn sheep occupied habitat overlaps designated wilderness, there are no feasible alternatives to using motorized (aircraft) transport and GPS collaring which would enable disease sampling of the herd (see Section 2.3). The Minimum Requirements Analysis Framework (MRAF)<sup>2</sup>, in Appendix A, explains why bighorn sheep management is important to wilderness character, why the listed prohibited uses are necessary to ensure the safety of both the bighorn sheep and researchers, and why the use of a contractor meets the special provision in 16 USC 1133 §4(d)(5).

In addition, the John D. Dingell Conservation, Management, and Recreation Act (Dingell Act, Public Law 116-9) Subpart B Wilderness Areas, Section 1233 states, "Nothing in this subpart affects the jurisdiction of the State with respect to fish and wildlife on public land located in the State." Therefore, Utah explicitly retains jurisdiction over wildlife in wilderness areas, but their activities are subject to the provisions of the Wilderness Act.

##### **1.4.2. Dingell Act of 2019 (Dingell Act, 16 U.S.C. 1)**

The Dingell Act's stated purposes for the San Rafael Swell Recreation Area are to provide for the protection, conservation, and enhancement of the recreational, cultural, natural, scenic, wildlife, ecological, historical, and educational resources of the Recreation Area. The Proposed Action is designed to protect, conserve and enhance wildlife (bighorn sheep) and would not affect the other purposes of the Recreation Area.

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<sup>2</sup> A Minimum Requirements Analysis Framework documents the agency's minimum requirements analysis for an action proposed in a wilderness area that involves a use otherwise prohibited by the Wilderness Act

#### 1.4.3. Federal Land Policy and Management Act (FLPMA, 43 U.S.C 1701)

The Federal Land Policy and Management Act requires that public lands be managed in a manner that will provide habitat for wildlife. It also requires consideration of the long- term needs of future generations for renewable and nonrenewable resources, including, but not limited to, wildlife. It recognizes the State's responsibility and authority for management of resident wildlife. It also requires that public land uses minimize adverse impacts wildlife habitat. The proposal comes from the State and is designed to monitor the biological and health information of the desert bighorn sheep which would inform proper identification and management of their habitats.

#### 1.4.4. Department of the Interior Fish and Wildlife Policy: State-Federal Relationships (43 CFR §24.3)

The Interior's fish and wildlife policy states: "In general the States possess broad trustee and police powers over fish and wildlife within their borders, including fish and wildlife found on Federal lands within a State." While the State of Utah has jurisdiction over wildlife in Utah, the cited statute does not require or provide for specific activities nor does it explicitly override any requirements of other statutes.

#### 1.4.5. Utah Wildlife Action Plan of 2025

Utah's Wildlife Action Plan identifies the following data gaps as hampering the ability to effectively manage species; inadequate understanding of ecology and life history and inadequate understanding of distribution or range. The proposed action would enable the State to add data to these gaps by providing life and distribution data through health monitoring and GPS tracking.

#### 1.4.6. Utah Bighorn Sheep Statewide Management Plan of 2018

Utah's San Rafael Bighorn Sheep Statewide Management Plan states that when possible DWR will use GPS collars to better understand survival, distribution, and movements of each herd, refine estimates of the population size, and better understand resource partitioning and livestock interactions with bighorn sheep. It also states that several capture and disease-testing protocols have been identified and should be implemented when endorsed by the Western Association of Fish and Wildlife Agencies Wildlife Health Committee. The proposed action would enable the State to gather data about the distribution and health of the bighorn sheep population in the San Rafael Swell unit.

#### 1.4.7. Utah Bighorn Sheep San Rafael Unit Management Plan

Utah's San Rafael Bighorn Sheep Unit Management Plan for the San Rafael WMA #12 contains goals to manage for a healthy population of desert bighorn sheep, balance bighorn sheep impacts with other uses, and maintain a sustainable population. Methods include live captures to assess herd health and GPS collar technology to assess population trends and health including estimates of survival. The proposed action would enable the State to gather data about the distribution and health of the bighorn sheep population in the San Rafael Swell unit.



## 1.5. Conformance with the Land Use Plan

Land Use Plan: Price Field Office Record of Decision and Approved Resource Management Plan (RMP)

Date Approved: October 2008

The Proposed Action is clearly consistent with the following decisions of the RMP (BLM 2008 p. 81):

- **WL-2:** Continue to recognize and implement, to the extent feasible, UDWR wildlife management plans (and associated revisions) and those of other cooperating agencies. Future plans and agreements will be considered for implementation on a case-by-case basis through applicable regulatory review.
- **WL-5:** Continue existing Habitat Management Plans (HMP). *Allow or participate in research of all wildlife species and their habitats* [emphasis added].
- **WL-13:** Where possible, implement the conservation actions identified in the Utah Comprehensive Wildlife Conservation Strategy (Gorrell et al. 2005), which identifies priority wildlife species and habitats, identifies and assesses threats to their survival, and identifies long-term conservation actions needed, including those on BLM-administered lands.

*Note: The State of Utah updates the Comprehensive Wildlife Conservation Strategy (now called the Wildlife Action Plan) every 10 years. The current version used, DWR 2025, is detailed in Section 1.6.*

## 1.6. Scoping and Issues

Table 1-1 contains the issues the BLM's interdisciplinary team identified for detailed analysis during internal scoping. Table 1-2 contains additional issues the BLM's interdisciplinary team considered but dismissed from analysis, including the rationale for the dismissal. A complete list of the resources and issues considered by the team is documented in the project record.

**Table 1-1 Issues to be Analyzed in Detail**

Resource	Issue to be Analyzed in Detail
Wildlife	How would the proposed gun netting and collaring affect desert bighorn sheep?
Wilderness	How would the proposed helicopter supported activities and use of radio collars impact the wilderness characteristics of the affected San Rafael Swell wilderness areas?

**Table 1-2 Issues Dismissed from Detailed Analysis**

Issue	Detailed Analysis Dismissal Rationale
How would the proposed staging areas and helicopter landings affect cultural or paleontological resources?	No impacts to cultural or paleontological resources would occur because staging would take place in previously disturbed areas (existing campgrounds, dispersed campsites, or gravel pits) causing no new ground disturbance. Also, flight activities would not cause any ground disturbance because they will only land on rock outcroppings, previously disturbed areas or on designated routes. Cultural and paleontological resources are not found at the staging areas. If cultural or paleontological resources were encountered, the BLM Price Field Office would be notified.
How would the proposed capture activities and staging areas affect the following ACECs: San Rafael Canyon, Interstate 70 Scenic, San Rafael Reef, Segers Hole, Muddy Creek, and some units of the Rock Art, Heritage Sites, and Uranium Mining Districts ACECs?	The ACEC's relevant and important values would not be impacted because there would be no new ground disturbance, construction, or other activities which could affect scenic values or resources. Additionally, no activities prohibited by the RMP are included (firewood cutting, oil and gas leasing, etc.). Helicopters could land occasionally, but the footprint of the area impacted is small and no disturbance of cultural sites, structures, or other features is expected.
How would the proposed capture activities affect the San Rafael Swell Recreation Area?	A small portion of the capture area (roughly 30,000 acres) and three of the staging areas are within the San Rafael Swell Recreation Area. The proposal is designed to protect, conserve, and enhance wildlife resources of the Recreation Area by monitoring biological and disease data in desert bighorn sheep where occupied habitat overlaps with the Recreation Area. Cultural, historic, ecological, and scenic values would not be degraded due to the lack of ground disturbance. For recreating members of the public who encounter capture activities, the capture would provide a unique opportunity for education. Many of the capture areas are popular for front-and backcountry recreation. The DWR has requested a time of year when recreation is low (middle of winter), significantly reducing potential impacts to recreation. Encounters between members of the public and capture activities would be most likely to occur at the Wedge and along Buckhorn Draw (including Calf and Cow Canyons), which receive a high volume of visitation and are visited year-round. Buckhorn Draw in particular is regularly occupied by sheep and has been the site of past captures. Due to the temporary and localized nature of activities, these sites would still be open for recreation. A UDWR law enforcement officer and public affairs specialist would be on site at the staging area during the capture to interface with the public and to communicate recreationists' locations to the helicopter pilot, providing education and ensuring public safety. Bighorn sheep are of interest to many recreationists, so supporting sheep health and population numbers enhances the recreation experience as there might be more sightings. Additionally, healthy herd numbers allow the UDWR to increase the number of available tags to hunters. Based on

Issue	Detailed Analysis Dismissal Rationale
	the foregoing, the project would enhance recreational values of the Recreation Area.
How would the proposed staging activities affect the East Temple Mountain free use pit (UTU 095466)?	The BLM contacted Emery County Road Department regarding use of the gravel pit as a staging area. The Road Department responded by saying they have no concerns.
How would the proposed staging activities affect the Utah Department of Transportation materials site right of way UTU 090631?	The terms and conditions reserve to BLM the right to authorize non-highway use on any portion of the ROW. However, UDWR must coordinate with UDOT to ensure that it does not interfere with the operation of the materials site.
How would the proposed staging activities affect the BLM's Swinging Bridge Campground right of way UTU 051319?	The BLM requires UDWR to communicate the timing of their use of this site so that BLM may patrol the site when captures are occurring nearby in case the public has questions.
How would the proposed capture activities affect lands with wilderness characteristics?	The capture area includes portions of many LWC units adjacent to wilderness. The units showing the largest overlap with desert bighorn sheep habitat (per GIS review) are NLCS003149 Sids Mountain, NLCS003054 Mexican Mountain, NLCS003137 San Rafael Reef, NLCS000936 Devils Canyon, and LNCS003074 Muddy Creek-Crack Canyon. The wilderness characteristics of these units would not be adversely impacted because there would be no permanent developments (undeveloped) or ground disturbance (appearance of naturalness). Activities support sheep health, which is beneficial in those areas where the sheep are a feature of value.
How would the proposed capture activities affect livestock grazing?	If cattle are present near the area of capture, cattle could experience short-lived stress and move away from the area for a time due to the helicopter. However, the proposed capturing would typically take place outside of areas where livestock would be grazing; bighorn sheep typically like steep and rocky terrain whereas cattle typically like relatively flat grassy terrain.
How would the proposed capture and staging activities affect invasive and noxious weeds?	After GIS review (accessed 12/09/2025) the BLM has mapped several noxious and/or invasive weed species in the project area or immediately adjacent to, including Musk thistle, Tamarisk, Cheatgrass and Russian Knapweed. UDWR must pre-wash vehicles and equipment prior to entering BLM administered lands.
How would the proposed capture and staging activities affect plants including BLM sensitive species and listed, proposed, or candidate species and critical habitats?	The Proposed Action would not authorize any new surface disturbing activities as all staging would take place in currently disturbed locations, therefore there would be no impact to plants including BLM sensitive species and listed, proposed, or candidate species or critical habitats.
How would the proposed staging activities affect riparian areas, perennial streams, and water quality?	Per GIS review, the mainstreams identified in the proposed action locations are the Muddy Creek and San Rafael River. According to National Wetland Inventory (accessed 12/9/2025), wetlands and riparian habitat are dominantly along these main streams but can be scattered throughout or near the proposed action gather locations. The closest staging area to these resources is the San Rafael Reef North staging area with 182 feet northeast to an unnamed Riverine wash and 431 feet northeast from Reef South of I-70 staging area to Riverine Wash known as Temple Wash. The use of

Issue	Detailed Analysis Dismissal Rationale
	existing disturbed sites for staging, parking, fueling, and processing the wildlife and use of a helicopter would avoid or mitigate impacts to streams, riparian, wetlands, and floodplains.
How would the proposed capture and staging activities affect recreation?	The DWR has proposed to conduct the project at a time of year when recreation is low (middle of winter). Encounters between members of the public and capture activities would be most likely to occur at the Wedge and along Buckhorn Draw (including Calf and Cow Canyons), which receive a high volume of visitation and are visited year-round. Buckhorn Draw in particular is regularly occupied by sheep and has been the site of past captures. Due to the temporary and localized nature of activities, these sites would still be open for recreation. A UDWR law enforcement officer and public affairs specialist would be on site at the staging area during the capture to interface with the public and to communicate recreationists' locations to the helicopter pilot, providing education and ensuring public safety. Bighorn sheep are of interest to many recreationists, so supporting sheep health and population numbers enhances the recreation experience as there might be more sightings. Additionally, healthy herd numbers allow the UDWR to increase the number of available tags to hunters. In addition, the BLM requires UDWR to communicate the timing of their project so that BLM may patrol when captures are occurring nearby in case the public has questions.
How would the proposed capture and staging activities affect visual resources?	The wilderness areas where the capture would occur as well as the I-70 Scenic ACEC are VRM Class I; surrounding areas are Class II and III. Visual resources would not be impacted because there would be no new ground disturbance or construction associated with the capture.
How would the proposed capture and staging activities affect wild horses?	These captures could take place in the Muddy Creek Wild Horse HMA as well as the Sinbad Burro HMA. Helicopter overflights may temporarily disturb wild horses and burros in the vicinity of the capture. Impacts beyond short-lived stress are not expected because these animals would not be the target of pursuits, which would already be short in duration, and could readily escape the area.
How would the proposed capture and staging activities affect wildlife including BLM sensitive species and listed, proposed or candidate species and critical habitats other than bighorn sheep?	The Proposed Action would take place during the winter months, when most migratory birds would have migrated out of the area. The Proposed Action would not result in any water depletions. Therefore, there would be no effect to special status or listed fish species. The Proposed Action would authorize helicopters flying over and through habitat suitable for the Mexican Spotted Owl, per a review of modeled habitat (Lewis 2014). However, the work would be done in January, which is outside of the breeding season for the species (March 1 through August 31). Additionally, the work would be done in a day or less in each survey location and would authorize no new surface disturbance. Therefore, there would be no impact to animals including BLM sensitive species and listed, proposed, or candidate species or critical habitats.
How would the proposed capture and staging activities affect public health and safety?	Helicopters have a higher crash rate than other aircraft, and a crash could result in oil or gasoline spills. To mitigate risk, all staff involved with flights would have extensive training and experience doing similar activities. The capture would be executed by a contracted company which specializes in wildlife live captures, and UDWR staff involved would be similarly experienced with wildlife handling. If a crash did occur, industry-standard

Issue	Detailed Analysis Dismissal Rationale
	cleanup protocol would be handled by the contractor, and UDWR law enforcement would be at the nearest staging area to facilitate response.
How would the proposed capture and staging activities affect economics?	The Proposed Action does not create potential output for goods or services. While it would create value through contracted jobs, these jobs would be temporary (4 days) and very limited in number (<10). Due to the highly specialized nature of helicopter-assisted net gunning, a specialist contractor would be hired from outside of the immediate area, so any value added through the contracted jobs likely would not have local economic effects.
How would the proposed capture and staging activities affect the quality of life of the American people?	The Proposed Action would not cause any long-term changes to the natural or physical environment or to the administration of the affected wilderness area, so there would not be adverse impacts to values such as recreation, public resources, traditional activities, or historical uses. Bighorn sheep are of cultural, scientific, or recreational interest to many individuals and groups, so supporting their health indirectly enhances those values. The capture would also provide opportunities for education about bighorn sheep and UDWR's conservation efforts, although few users are likely to be present due to the winter timing. Overall, the project would occur in a remote location with a primary focus on wildlife management, so there would not be any substantive impacts to quality of life.

## CHAPTER 2. ALTERNATIVES

This chapter describes the alternatives that the BLM considered in response to UDWR's proposal. The Proposed Action was developed through careful consideration of the UDWR's objectives, possible avenues for attaining them, and the findings of the MRAF (see Appendix A). These are summarized in 2.3 Alternatives Considered but Dismissed from Detailed Analysis as they carried concerns for either human or sheep safety.

### 2.1. Proposed Action

The Utah Division of Wildlife Resources (UDWR) has requested to conduct a helicopter-assisted live capture of desert bighorn sheep in the San Rafael North and San Rafael South units (Unit 12) of the San Rafael Swell. UDWR would implement the capture operation with the assistance of a contracted capture company in January 2026 over the course of four days. The capture would occur entirely within established desert bighorn sheep habitat previously identified in the 2019 Bighorn Sheep Unit Management Plan, much of which is federal wilderness.

The Proposed Action entails capturing and processing up to 30 desert bighorn sheep (12 ewes and 3 rams from both the North and South subunits). It is described in detail in the capture plan provided to the BLM (UDWR 2025). The activities include:

- Locating target bighorn sheep using a helicopter;
- Pursuing individual animals for no more than five minutes;
- Capturing via net gun;

- Dropping a handler (“mugger”) nearby and safely restraining animals using hobbles and blindfolds;
- Conducting on-site biological processing (body measurements, disease sampling including swabs and blood, fecal sampling, and temperature monitoring);
- Fitting GPS collars to support long-term monitoring of movements, survival, and interactions; and
- Safely releasing animals at the capture site.

All work would follow UDWR’s established helicopter capture and animal welfare protocols, including limits on chase times, on-site temperature management, and immediate release when stress indicators exceed thresholds. The helicopters would hover if processing time were expected to be short but might land if multiple sheep were captured (extending processing time) to reduce stress as well as noise disturbance.

Activities would be broken down into five general locations with corresponding staging areas as shown on Figure 1-1 and summarized in Table 2-1.

**Table 2-1 Capture Area Overview**

Capture Zone	Staging Area	Wilderness
Buckhorn Draw/Little Grand Canyon (San Rafael River)	Swinging Bridge Campground	Sid’s Mountain, Mexican Mountain
San Rafael Reef north of I-70	Black Dragon dispersed use area	Mexican Mountain
Eagle Canyon, Coal Wash	Moore Cutoff Road Gravel Pit	Eagle Canyon, Cold Wash
Copper Globe to Muddy Creek drainage	Tomsich Butte dispersed use area	Muddy Creek, Red’s Canyon
Lower San Rafael Reef (Bell Canyon to Iron Wash)	East Temple Mountain Free Use Pit	Muddy Creek, San Rafael Reef

No new ground disturbance would occur. All staging, access, and parking would occur within existing disturbed areas, such as established parking lots and designated campgrounds. Transported vehicles, equipment, and fuel would be kept at staging areas, each of which would be active for one or two days depending on capture success. Sheep testing would be done on site where the sheep is captured. If an animal is injured and not expected to survive, the animal would be flown back to the staging area via short haul for assessment and treatment (including euthanasia if severity warrants). UDWR public relations staff and safety officers would be on site at staging areas should recreationists encounter the operation.

Monitoring associated with the Proposed Action includes:

- Real-time monitoring of each animal’s temperature and stress during capture;
- Deployment of GPS collars with typical lifespan of 4 years;

No additional construction, maintenance, or long-term surface disturbance is associated with this project.

#### 2.1.1. Design Features

The following design features would ensure public safety and minimize environmental impacts:

- UDWR would only use previously disturbed sites for staging, parking, fuel storage, and processing.
- Other than helicopter landings as previously described, UDWR would not use off-road motorized travel
- UDWR's contractor would land aircraft on designated routes, rock outcroppings, and old roads when feasible to minimize ground disturbance
- UDWR would limit helicopter pursuit to  $\leq 5$  minutes per animal.
- UDWR would discontinue or modify operations if repeated elevated animal body temperatures are observed in the same capture area.
- UDWR would release sheep at the capture site to keep them in familiar and safe habitat
- UDWR would limit all activities to daylight hours.
- UDWR's contractor would implement safety briefings, flight-following, and emergency procedures.
- UDWR would prohibit public access to active staging zones for safety.
- UDWR would refrain from net gunning if recreationists are in the vicinity.

During past UDWR overflight counts, BLM has received inquiries about the nature of the activities. To aid in public education, BLM may patrol high-use recreation sites when captures are occurring nearby.

## 2.2. No Action Alternative

Under the No Action Alternative, the BLM would not authorize helicopter-assisted live capture of desert bighorn sheep in the San Rafael North and San Rafael South units. UDWR would not conduct capture operations or deploy new GPS collars within BLM-administered portions of the project area (including wilderness). No staging areas would be activated, no helicopter flights for capture purposes would occur, and no biological samples or disease diagnostics would be collected through this effort.

This alternative assumes that no disturbance beyond ongoing authorized uses would occur at staging areas or within occupied bighorn habitat. The UDWR would be reliant only on aerial surveys, ground classifications, and opportunistic sampling for population monitoring as well as data from existing radio collars.

In this case, the no action alternative represents a continuation of the affected environment's conditions, trends, and actions. Please refer to the affected environment sections in Chapter 3 for this alternative's impacts because they are not repeated in a no-action-specific environmental effects section to reduce redundancy.

### **2.3. Alternatives Considered but Eliminated from Detailed Analysis**

Technically, wildlife monitoring and management activities are outside of the BLM's jurisdiction so the UDWR could conduct live captures outside wilderness as proposed and in wilderness using methods that are not prohibited uses. In the MRAF, the BLM considered two methods by which the UDWR could monitor the bighorn sheep's herd health and distribution that are not Wilderness Act prohibited uses. However, these two methods are unlikely to be successful and, to the contrary, could be detrimental to the herd, given that more than 70% of the unit is in wilderness and the methods result in lower quality and quantity of data and higher bighorn sheep mortality rates as described in the next two subsections. Further detail about the two methods are in the MRAF (see Appendix A Step 2).

#### **Collaring in Wilderness Alternative: Capture-Mark-Recapture in Wilderness**

Capturing and tagging a sheep and documenting sightings (incidental and during future recaptures) is one method for tracking their movement across the desert. However, this method involves not only the stress of the initial capture but the stress of subsequent re-captures, as compared to a radio collar where location can be detected without recurring contact with the animal. Furthermore, the capture-mark-recapture method provides only intermittent data instead of the continuous locations of the collars; one major benefit of continuous locations is detecting early warning signs of disease (slowed movement) which could spread to other animals. Additionally, radio collars send out a specific 'mortality' signal when the animal wearing it stops moving long enough to assume the animal has died. This knowledge of animal mortality is not possible with mark and recapture methods as the animal marked is assumed to be living unless their remains are found by chance. The limited amount of information provided by capture-mark-recapture method makes it ineffective at responding to the purpose and need, so it was dismissed from further analysis.

#### **Helicopter and Gun Netting in Wilderness Alternative: Ground Darting Capture in Wilderness**

As an alternative to helicopter use to trap the sheep for testing, the UDWR has previously attempted to pursue sheep by foot and use tranquilizer darts. Ground darting capture historically has been detrimental to sheep health; 5 of the 23 bighorn sheep (21.7%) darted in the past decade died during or in the weeks following the capture due to stress-induced capture myopathy (W. Paskett, personal communication, 12/2/2025). By contrast, helicopter mortality rates are around 3%. Additionally, a pack string would be necessary to facilitate travel and equipment transport over long distances and multiple days. During a past operation, these activities endangered human participants since San Rafael Swell's herds predominantly live in the cliffs and canyons on the perimeter of the of the anticline (Navajo/Wingate sandstone) in an area with few to no trails and water sources. The risk of sheep mortality makes this alternative ineffective at responding to the purpose and need and inconsistent with both the UDWR's and the BLM's wildlife conservation objectives. The risks to human safety also make it infeasible.



## CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter defines the scope of analysis contained in this EA, describes the existing conditions relevant to the issues presented in Table 2-1, and discloses the potential impacts of the proposed action and alternatives.

### 3.1. Reasonably Foreseeable Future Actions (RFFA) Common to all Issues

The following recreation actions and activities are ongoing in the capture area, though due to the time of year they may not intersect with the Proposed Action:

- Nonmotorized recreation throughout all wilderness areas, though with more established opportunities as follows:
  - Day hiking: Mexican Mountain, Sid's Mountain, Devil's Canyon, Muddy Creek, San Rafael Reef
  - Technical canyoneering: San Rafael Reef, Muddy Creek, Mexican Mountain, Eagle Canyon
  - Backpacking: Mexican Mountain, Sid's Mountain, Muddy Creek
  - Rock climbing: Mexican Mountain, Sid's Mountain, San Rafael Reef
  - Horseback riding: Mexican Mountain, Sid's Mountain, Muddy Creek
  - Seasonal river floats: Mexican Mountain, Sid's Mountain, Muddy Creek

The following rangeland management activities

- Cattle grazing, including continued use of range improvements
- Wild horse and burro management: one emergency wild horse gather in Muddy Creek occurred in 2025 and one is planned for 2026

The UDWR has been monitoring sheep for decades and will continue to do so. Future requests for authorizations like the Proposed Action (helicopter-supported live captures) are reasonably foreseeable. Continued overflights every three years are also reasonably foreseeable, with the next one being in 2027.

### 3.2. Issue 1: How would the proposed gun netting and collaring affect desert bighorn sheep (*Ovis canadensis nelsoni*)?

#### 3.2.1. Methodology and Assumptions

The analysis area for desert bighorn sheep is two of the three sub-units - San Rafael North and San Rafael South – of the UDWR's San Rafael Wildlife Management Unit (SRWMU) #12. This fully encompasses the area in which the UDWR is proposing to do sheep captures and is separated geographically from other sheep habitat. The analysis area covers a total of 1,945,037 acres.

The impact indicator for desert bighorn sheep is the number captured and collared. The DWR is proposing a to capture and collar 3 rams and 12 ewes from the North San Rafael sub-unit and 3 rams and 12 ewes from the South San Rafael sub-unit, for a combined total of 30 sheep.

### 3.2.2. Affected Environment

The entirety of the SRWMU covers roughly 6 million acres, with three sub-units: San Rafael North, San Rafael South and Dirty Devil (Figure 1-1). The North and South San Rafael sub-units are connected geographically, and movement of desert bighorn sheep between the sub-units has been observed by UDWR. The Dirty Devil sub-unit lacks suitable habitat connection to the other sub-units, which does not allow movement of sheep to the other sub-units. The analysis area contains 1,945,037 acres of land, with 715,124 (37%) of those acres modeled as desert bighorn sheep habitat (UDWR 2019). Of the modeled habitat in the sub-units, 625,094 (87%) acres are on BLM managed land (Figure 3-1) (UDWR 2019). The Price RMP has designated 345,324 acres (18%) of the analysis area as crucial year-long habitat for desert bighorn sheep.

The North and South sub-units contain a varied array of human development on a wide spectrum of densities. Developments include towns such as Price and Huntington, as well as large roadways like Interstate 70, large mining operations such as the Bronco coal mine, and several recreation sites like those in Buckhorn Draw. Most of the suitable habitat for desert bighorn sheep in the SRWMU sub-units is located within the 427,054 acres of designated wilderness, which are primarily free from human development and motorized access. A total of 71% of occupied habitat (UDWR 2024) is in wilderness, broken down into 18% of substantial habitat and 77% of crucial habitat. Within action area, the foreseeable trends and planned actions include those trends common to all issues listed in section 3.1 and:

- Nonmotorized recreation in some non-wilderness locations, namely Buckhorn Draw;
- Mountain biking on Good Water Rim trail above the Good Water Canyon/Little Grand Canyon and gravel biking on designated routes;
- Motorized recreation (including sightseeing and car camping) on designated routes and in BLM facilities, concentrated around the Wedge, Buckhorn Draw, and Temple Mountain. One of the staging areas is at a campground, and two are well-used dispersed campsites and include motorized recreation outside the wilderness areas and nonmotorized recreation within the wilderness areas.

Desert bighorn sheep are native to the San Rafael Swell but were extirpated by the early–mid 1900s following intensive domestic sheep grazing. For more than 50 years the UDWR has been working to restore bighorns to historical populations, with current herd counts being at ~60-70% of target. Reintroductions beginning in the late 1970s successfully re-established herds, but the North sub-unit saw significant decline from 2005 to 2011 and the South sub-unit from 2015 to 2018. While herd numbers have now stabilized, they are still below UDWR’s objective of 500 individuals per unit. Though they are no longer federally listed, sheep are vulnerable to future human-driven impacts. Research confirms that *Mycoplasma ovipneumoniae* and other pneumonia-causing bacteria continue to threaten long-term herd health, and other threats persist such as stress from human recreation (Papouchis et al. 2001, Whiting et al. 2023). Monitoring efforts by the UDWR has enabled the state to monitor disease health through population counts, disease detection, and tracking reproductive success.



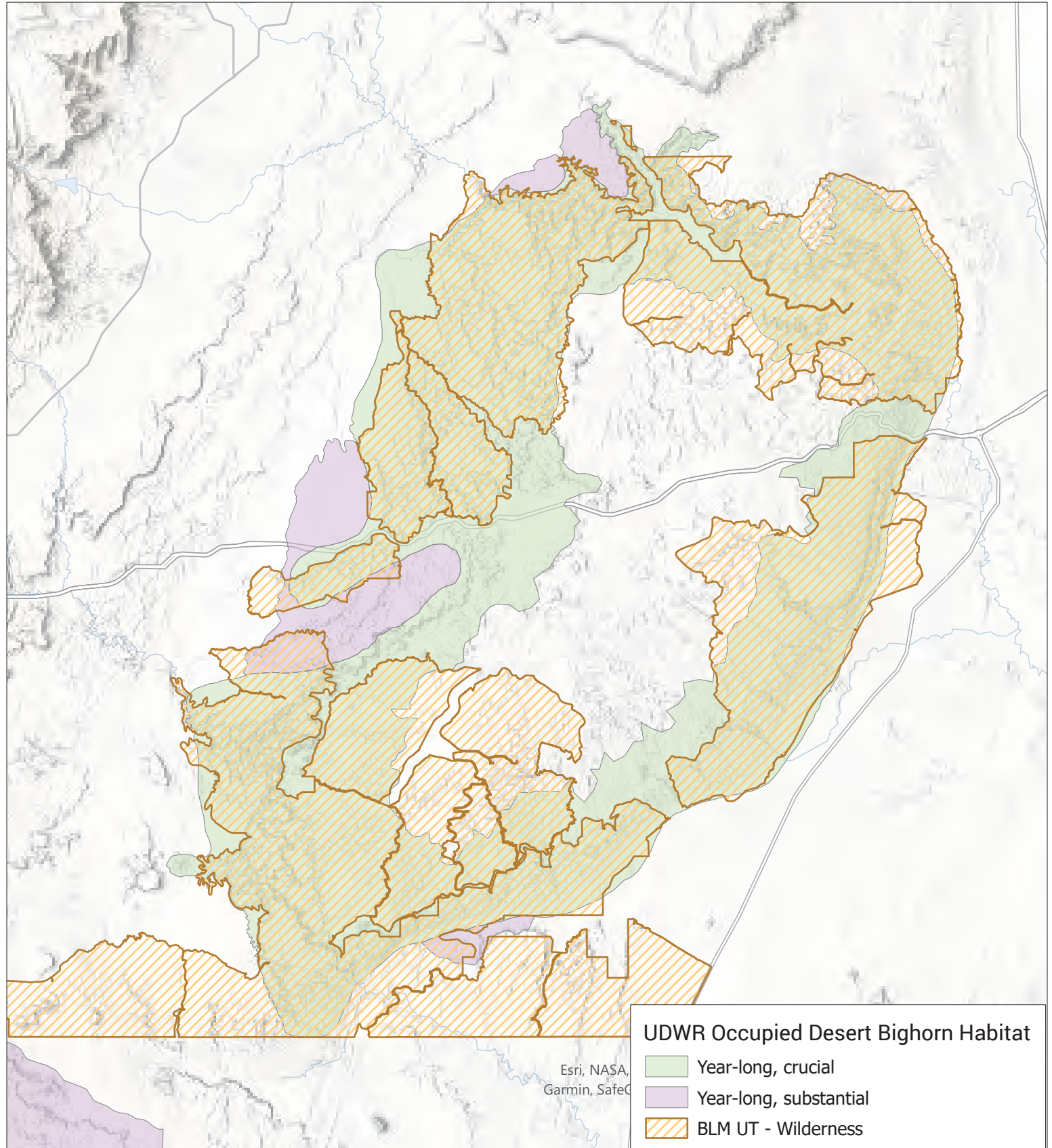
# Figure 3-1 Bighorn Occupied Habitat

Bureau of Land Management, Utah  
Price Field Office  
125 South 600 West  
Price, UT 84501



UDWR mapped crucial and substantial desert bighorn habitat in the San Rafael Swell.

12/15/2025



0 8 Miles

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.

### 3.2.3. Environmental Effects

#### 3.2.3.1. *Effects of the Proposed Action*

For multiple decades, the UDWR has conducted capture and collaring work for desert bighorn sheep within the SRWMU every 5 years. Based on prior projects, no impacts to desert bighorn habitat are expected.

Approving the Proposed Action would continue capture and collaring activities and maintain the same scientific and geographic scope as past captures. Potential impacts to the sheep include increased energy expenditure during capture activities, temporary disruption of regular activities, short-term physiological responses to capture, and a possible mortality rate of 3% or less (W. Paskett, personal communication, 12/2/2025). However, it would give UDWR more information about the disease load and trends of the sheep, as well as information about their spatial use of the land and their reactions to threats such as recreational use in their habitats. Properly fitted collars made from recommended materials should have little impact to the sheep and allow for the acquisition of meaningful and unbiased information (Hernández, Cox & Jex 2024).

There are expected to be short-term physiological impacts to bighorn sheep from chase and capturing work. These include temporary changes to rectal temperature, heart and respiratory rate, as well as serum enzyme, glucose and corticoid levels (MacArthur et al 1986, Wagler et al. 2022). Handlers will monitor the body temperatures of all captured sheep with a rectal thermometer for the duration of their handling time. Rectal temperature is used as an indicator of the overall stress level of each animal, as well as a way to monitor for hyperthermia, which can occur from prolonged chase times and individual animal responses to capture (Bleich & Lutz 2024). Monitoring of rectal temperature and taking actions to lower it are recommended as a best practice in capture of bighorn sheep and is associated with a lower rate of mortality related to capture work (Wagler et al. 2022, Bleich & Lutz 2024). Any animals with excessively high temperatures will be cooled by external application of a mixture of alcohol and water, ice or snow to their ventral surface (Bleich & Lutz 2024). Additional short-term impacts include the possibility of injury or death of bighorn sheep during capture work, and immediately following their release (Wagler et al. 2022, Jessup et al. 1988). However, the rate of mortality associated with helicopter assisted netted capture of sheep in previous studies, and from UDWR's collected data is low (1.9 – 3%) (W. Paskett, personal communication, 12/2/2025, Wagner et al. 2022, Bates et al. 1985, Jessup et al. 1988). Release of captured sheep will be done in the same location as their capture, which will keep sheep within familiar habitat, eliminating the possible negative impacts from introducing the sheep into unfamiliar or inhospitable habitat (Werdel et al. 2021).

In the long-term, data gathered through the capture work and deployed radio collars is beneficial because it informs management decisions by UDWR and the BLM. For example, UDWR could quarantine or remove sick individuals from the population to reduce the spread of disease. Removal of infected adults from populations can increase juvenile recruitment and therefore help ensure the long-term success of herds (Whiting et al. 2023). In addition, data on sheep movement and health informs BLM actions such as recreation development plans.

No new surface disturbance would be expected from the helicopter use in capture and collaring activities. Bases of operations would be confined to rock outcroppings, previously disturbed areas and designated routes. Therefore, no impact to desert bighorn sheep habitat would occur.

### **3.3. Issue 2: How would the proposed helicopter supported activities and use of radio collars impact the wilderness characteristics of the affected San Rafael Swell wilderness areas?**

#### **3.3.1. Methodology and Assumptions**

The targeted capture area includes Sid's Mountain, Mexican Mountain, Cold Wash, Eagle Canyon, Devil's Canyon, Muddy Creek, and San Rafael Reef wilderness areas.

The temporal scope of analysis is ten years, and the geographic scope of analysis is the 14 desert wilderness areas around the project area (as shown in Map 1-1), referred to informally here as the "San Rafael Swell Wilderness Complex" for the sake of brevity.

Impacts to wilderness character could take many forms. The BLM recognizes and uses five qualities of wilderness character: untrammeled, natural, undeveloped, having outstanding opportunities for solitude or primitive and unconfined recreation, and optionally having other features of unique value (BLM 2012). Following the interagency wilderness monitoring strategy used at time of writing, the impact indicators for this issue will be the following indicators used by the BLM for wilderness character monitoring (per Landres et al. 2015)<sup>3</sup>:

- Number of authorized actions and persistent structures designed to manipulate the natural environment (Measure 1-1)
- Index of physical development for structures or installations (Measure 3-1)
- Administrative, non-emergency use of motor vehicles, motorized equipment, and mechanical transport on a per-project basis (Measure 3-3)

Tables 3-1, 3-2, and 3-3 present the baselines of and Proposed Action impacts on these scores. Table 3-2 (Measure 3-1) only presents data on non-linear infrastructure sites for the sake of brevity because the actual index includes numerous categories (fences, dams, guzzlers, reservoirs, easements, abandoned mines, and non-historically significant buildings). Full indices are available upon request.

#### **3.3.2. Affected Environment**

The fourteen wilderness areas in the analysis area protect a combined 427,054 acres of rugged desert canyons, mesas, and rolling drainages supporting a variety of desert habitats and human recreation opportunities. Their values were previously identified in BLM wilderness inventory documents in 1980 and 1999, with most of the acreage having been either Wilderness Study

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<sup>3</sup> Scores are estimated based on the activities proposed, factoring all wilderness areas together. The actual impact for each wilderness would vary depending on where the activity takes place. For example, if all captured South Unit sheep were to be found in the Muddy Creek Wilderness, Muddy Creek Wilderness would take the full impact score whereas the score for the San Rafael Reef Wilderness would be unchanged. Collar scores would be assigned based on the wilderness area the sheep are collared in, with awareness that the sheep move between wilderness.

Areas or BLM natural areas (areas managed to protect their wilderness characteristics by the Price RMP) prior to the Dingell Act in 2019. The seven wilderness areas where the captures would occur protect much of the more dramatic terrain, including the canyon complexes of the San Rafael River and Muddy Creek (Sids Mountain, Mexican Mountain, Muddy Creek); several large secondary drainage systems (Devil's Canyon, Eagle Canyon, Cold Wash); and the San Rafael Reef, a distinctive wall of jutting sandstone that marks the eastern edge of the San Rafael Anticline (San Rafael Reef, Mexican Mountain).

The current and foreseeable future trends and actions that may affect wilderness character through human activity or facility development are listed in Section 3.1. To protect wilderness character, the Wilderness Act prohibits landings of aircraft and installation of structures unless they meet the minimum requirements for administration of the area. Action would need to occur within wilderness because the sheep herds live nearly entirely in wilderness (Figure 3-1). Comparisons of possible alternatives and rationale for why the proposed prohibited uses are the minimum necessary to protect wilderness character is carried out in the Minimum Requirements Analysis Framework in Appendix A.

Desert bighorn sheep are identified as a supplemental value in several wilderness character inventories and management documents and are an important part of the natural quality and overall wilderness character of the Swell. Wilderness management affords the herds many benefits:

- Prohibition of motorized and mechanized travel, tools, and equipment, including several recreational stressors of bighorn sheep (bicycles, motorized vehicles) (Papouchis et al. 2001, MacArthur et al. 1982).
- Management objective of primitive recreation; as a result, few recreation developments exist in wilderness, resulting in use that is low for the region and concentrated in certain areas (per PFO visitation data, available upon request)
- Prohibition of developments which could reduce or fragment habitat
- Preservation of natural ecological processes as-is

Since the Dingell Act was signed, there has only been one authorization of a prohibited activity, tool, or installation, the authorization of a fence in Sid's Mountain Wilderness to prevent motor vehicle travel. Table 3-3 includes structures which predate wilderness designations and currently exist in wilderness. Additionally, periodic localized weed treatments, noted in Table 3-1, are ongoing but do not use any prohibited tools.

### 3.3.3. Environmental Effects

The analysis below evaluates how the Proposed Action would affect the five qualities of wilderness character as described in BLM Manual 6340 Management of Designated Wilderness (BLM 2012) and the Keeping it Wild interagency wilderness management guidance (Landres et al. 2015).

#### 3.3.3.1. *Effects of the Proposed Action*

**Untrammeled quality:** Wilderness should be free from intentional human manipulation of biophysical processes.

The Proposed Action would temporarily degrade the untrammled quality because the capture operation—including helicopter pursuit, net-gunning, sheep handling, biological sampling, and collaring—constitutes intentional manipulation of wildlife behavior and movement. This influence is direct, short-term, and ends upon release of the sheep. Following past captures, GPS and overflight data show sheep resumed normal movement and habitat use upon release (Figure A-1). The Proposed Action does not manipulate ecosystem processes beyond individual animal disturbance, and no habitat modifications would occur. Additionally, both health testing and GPS tracking enable UDWR to identify and respond to problems in the future, such as removing a sick animal who is spreading disease. Early intervention prevents the need for later actions which could have more significant trammeling impacts such as translocations.

*Impact Indicator:* Number of authorized actions designed to manipulate plants, animals, pathogens, soil, water, or fire

**Table 3-1 Baseline & Impacts of Proposed Action: Trammeling Actions & Structures as of 2025 (Measure 1-1)**

Status	Wilderness	Type – Authorized Action	Type – Persistent Structures
Baseline	Sid’s Mountain	Intermittent treatment of 6 weed species	8 troughs, 2 stock ponds
	Mexican Mountain	Intermittent treatment of 6 weed species	7 stock ponds, 2 developed springs (holding water)
	Cold Wash	Intermittent treatment of 6 weed species	14 troughs
	Eagle Canyon	Intermittent treatment of 7 weed species	6 troughs, 4 stock ponds
	Devil’s Canyon	Intermittent treatment of 7 weed species	None
	Muddy Creek	Intermittent treatment of 6 weed species, one wild horse gather in 2025	4 troughs, 8 stock ponds
	San Rafael Reef	Intermittent treatment of 6 weed species	3 reservoirs, 1 guzzler
Proposed Action		Wildlife live capture	None

*Undeveloped quality:* Absence of motorized equipment, mechanical transport, installations, and other modern human developments.

The Proposed Action would involve the use of helicopters for aerial search, pursuit, and net-gunning. Although helicopters would not land except in limited circumstances, dropping off muggers from a hover is considered a “landing” under the Wilderness Act. GPS collars placed on sheep are installations, though they are small and unobtrusive. Research has shown that, when selected, sized and placed according to preferred protocol, collars do not compromise the animals’ well-being or alter their behavior (Bleich and Lutz 2004). Temporary motorized use (helicopter flight and potential landings) degrades the undeveloped quality during the 4-day operation. Aircraft would be visually apparent throughout much of the wilderness, although only

humans and animals in the immediate vicinity would notice the landing itself. To avoid excessive overflight, helicopters could land when there were longer processing times.

*Impact indicator: Index of physical development for structures and installations; type and amount of non-emergency administrative use of prohibited tools and equipment)*

**Table 3-2 Baseline & Impacts of Proposed Action: Nonlinear Sites/ Installations as of 2025, Measure 3-1**

Status	Wilderness Area	Number of non-linear sites
Baseline	Sid's Mountain	1 corral, 1 mineral location, 3 developed springs; one short fence
	Mexican Mountain	12 mineral locations, 5 water haul locations, 4 study plots, 1 corral, 3 developed springs
	Cold Wash	13 developed springs, 2 study plots
	Eagle Canyon	5 developed spring, 1 study plot
	Devil's Canyon	1 mineral tub
	Muddy Creek	4 troughs, 1 study plot
	San Rafael Reef	1 wildlife guzzler
	Multiple	<5 collars <sup>4</sup>
Proposed Action	<i>TBD</i>	30 collars

**Table 3-3 Baseline & Impacts of Proposed Action: Admin Use of Motorized Vehicles and Tools as of 2025, Measure 3-3**

	Wilderness	Project	Vehicles	Days/vehicle	Motorized tools	Days/tool	Score
Baseline	Sid's Mountain	Cane Wash fence (2022) & repair ('23)	3 (truck and excavator, truck)	2 (1, 1)	3 drills (3, 0)	1	15
	Mexican Mountain	None	0	0	0	0	0
	Cold Wash	None	0	0	0	0	0
	Eagle Canyon	None	0	0	0	0	0
	Devil's Canyon	None	0	0	0	0	0
	Muddy Creek	None	0	0	0	0	0
	San Rafael Reef	None	0	0	0	0	0
Proposed Action	<i>TBD</i>	Live Capture (2026)	1 helicopter	4	0	0	4

<sup>4</sup> The collars' typical lifespan is 4 years. They historically were installed every five years to allow more continuous data gathering, so from 2020-2025 the number of collars started at 30 and declined. When a collar falls off or the animal wearing it dies, UDWR will go to the last known location to retrieve it.



Score formula: Motor vehicles \* Days per vehicle \* 2 (proportionally largest impact) + Mechanized equipment \* days per tool<sup>5</sup> + Motorized tool \* days/tool

**Natural quality:** Ecological systems are substantially free from the effects of modern civilization.

Helicopter noise and brief overflights may temporarily disturb wildlife, potentially causing short-term displacement of bighorn sheep or other species (see previous discussion under “Untrammelled.”). The Proposed Action was selected because, out of the two options for capture (net guns vs. ground darting), net gunning has historically been significantly less stressful than ground darting, resulting in a fraction of the mortalities (W. Paskett, personal communication, 12/2/2025; see Appendix A for detailed discussion). Research on net gunning and collaring has shown that, when preferred operating procedures are followed, injury risk and individual stress is minimal and does not diminish the long-term viability of the herd (Bleich and Lutz 2024).

Biological processing and disease sampling may enhance long-term conservation of the herd by identifying carriers of pathogens responsible for past die-offs. Collaring supports long-term understanding of movement, survival, and disease transmission patterns, enhancing management of human-caused stressors (e.g., recreation pressure, past disease introduction) to preserve naturalness. The Proposed Action would not have short- or long-term impacts to vegetation, soils, or other aspects of the physical environment besides wildlife due to the lack of ground disturbance.

**Outstanding Opportunities for Solitude or Primitive/Unconfined Recreation:** Ability for visitors to experience solitude or recreate without modern restrictions.

Helicopter overflights would temporarily reduce opportunities for solitude due to noise and visual presence, particularly in quiet canyon settings where sound reverberation is pronounced. No closures or restrictions on backcountry travel are proposed, and BLM would not impose additional visitor management measures that limit unconfined recreation. Disruption would be confined to 4 days in January, a period of typically low visitation. Because operations are dispersed over a large geographic area, most recreationists—if present at all—would experience only brief interruptions.

**Other Features of Value:** Cultural, scientific, educational, and ecological features identified as important to wilderness character.

Desert bighorn sheep are recognized as a supplemental value in several wilderness character inventories, and their presence contributes ecological, educational, and scenic value. The Proposed Action would positively influence this quality by contributing to herd conservation through disease monitoring, survival tracking, and long-term spatial ecology data collection. These efforts support continued viability of a species integral to the wilderness character of the San Rafael Swell.

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<sup>5</sup> Measure also includes mechanized tools/travel such as bicycles; for the sake of conciseness, these columns were omitted as no such uses have ever been authorized nor are they part of the Proposed Action.

## CHAPTER 4. PUBLIC INVOLVEMENT, CONSULTATION AND COORDINATION

### 4.1. Public Involvement

This project was posted to ePlanning on December 16, 2025 for public notification purposes. One letter of support was received prior to signature citing the benefits of data collected by UDWR to other researchers.

### 4.2. Consultation and Coordination

Tribal Government-to-Government Consultation: Agency staff undertook an analysis to determine whether tribal consultation would be required or appropriate consistent with EO 13175 for this undertaking and the responsible official determined there is no reasonable basis to conclude that this undertaking would have tribal implications (EO 13175.1[a]; 2022 Presidential Memorandum on Uniform Standards for Tribal Consultation, Section 4). The Proposed Action is an evaluation of long-running wildlife conservation activities to ensure that the specific actions of net gunning and GPS collaring are the minimum methods necessary to attain conservation objectives pursuant to the Wilderness Act of 1964. Agency staff undertook an analysis to determine whether tribal consultation would be required or appropriate consistent with EO 13175 for this undertaking and the agency official concluded there is no reasonable basis this undertaking would not have tribal implications (EO 13175.1[a]; 2022 Presidential Memorandum on Uniform Standards for Tribal Consultation, Section 4). The proposed action would not limit access to or ceremonial use of Native American sacred sites, should such sacred sites be present (EO 13007), nor would the proposed action adversely affect the physical integrity of such sacred sites, because of the same justifications and stipulations listed above.

Consultation Pursuant to Section 106 of the National Historic Preservation Act: Staging would take place in previously disturbed areas (existing campgrounds, dispersed campsites, or gravel pits) causing no new ground disturbance. Flight activities would land on designated routes, rock outcroppings, and old roads when feasible to minimize ground disturbance. Therefore, cultural resources listed or eligible for listing would not be significantly affected or impacted by these activities pursuant to Section 106 of the National Historic Preservation Act (36 CFR 800), Archaeological Resources Protection Act (43 CFR 7), Antiquities Act (43 CFR 3), and Native American Graves Protection and Repatriation Act (43 CFR 10). Additionally, per the State Protocol Agreement Between the Bureau of Land Management Utah and the Utah State Historic Preservation Office Regarding the Manner in which the Bureau of Land Management will meet its Responsibilities Under the National Historic Preservation Act as Provided for in the National Programmatic Agreement (2020) projects proposing to “Survey, data, and information collection (including collection of samples)...” are exempt from Utah State Historic Preservation Office consultation (Appendix H).

Interagency Consultation and Cooperation: The Proposed Action was brought forward by the Utah Division of Wildlife Resources (UDWR) and is part of a long-term study which has been ongoing for many decades, during which UDWR has maintained communication with other entities as needed. The BLM did not conduct any additional consultation as both agencies having jurisdiction (UDWR over wildlife and BLM over federally managed lands) are already involved.

Section 7 Consultation with the U.S. Fish and Wildlife Service: Section 7 consultation is required when federal agencies undertake actions that may affect listed species or their critical habitats under the Endangered Species Act (ESA). Consultation with USFWS is not required in this case.

First, the Proposed Action is not a federal agency action, it is a state agency action. The BLM's authority is limited to conducting a Minimum Requirements Analysis for the portions of the action in wilderness that involves a use otherwise prohibited by the Wilderness Act.

Second, the Proposed Action would have No Effect on any Threatened, Endangered, Proposed or Candidate species or any designated Critical Habitat because the activity would occur in January, outside any listed species breeding or flowering timeframes. In addition, staging would take place in previously disturbed areas (existing campgrounds, dispersed campsites, or gravel pits) causing no new ground disturbance. Finally, the helicopter would land on designated routes, rock outcroppings, and old roads where possible.

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**APPENDIX A:**  
**Minimum Requirements Analysis Framework**

**(see EPlanning attachment)**