State of Utah

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Office of the Governor
PUBLIC LANDS POLICY COORDINATING OFFICE

KATHLEEN CLARKE
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July 23, 2020

*Submitted via electronic mail: mmckee@7county.utah.gov*

Seven County Infrastructure Coalition
Mike McKee
Executive Director
294 E 100 S
Price, UT 84501

Subject: **Uinta Basin Railway Project:**
**Mitigation Compliance for Greater Sage-grouse**

Dear Executive Director Mckee:

The State of Utah, through the Public Lands Policy Coordinating Office (PLPCO) and the Utah Division of Wildlife Resources (UDWR), has reviewed the proposed draft alternatives for the Uinta Basin Railway Project, currently proposed by the Seven County Infrastructure Coalition (Coalition). Under the State's Conservation Plan for Greater Sage-grouse (2019) (State Plan), the State has reviewed the proposed rail routes to determine if steps could be taken to mitigate impacts to sage-grouse habitat, including compensatory mitigation, as outlined in the State's regulations, policies, and programs related to the conservation of the greater sage-grouse.

After reviewing the proposed alternative routes, it appears that all routes will impact, to some degree, sage-grouse habitat located within the Carbon Sage-grouse Management Area (CSGMA). The total number of acres that will be impacted due to the project is dependent on which route alternative is selected, and on the actual ground disturbing activities that occur. As such, the State will provide a more concrete analysis of direct permanent disturbance impacts to sage-grouse habitat, after a route is selected through the NEPA process.

Of note, the State believes that a variety of steps should be taken to avoid and minimize impacts to sage-grouse habitat during construction and maintenance of the rail line. Those steps to avoid and minimize impacts may include timing restrictions during construction, recommended operational constraints, after construction, and best practices to limit disturbance to habitat to the minimum amount of ground disturbance necessary during construction, among other practices already being explored by the Coalition and the State. The State is committed to continuing to explore and develop potential strategies to avoid or minimize impacts to sage-grouse habitat, when a preferred alternative is selected and developed. However, the Coalition has already taken significant steps to avoid and minimize impacts to sage-grouse leks by re-routing the rail line away from leks and summer brood rearing habitat, a step likely to provide a long-term benefit to sage-grouse in the CSGMA.

In addition to steps taken to avoid and minimize impacts to sage-grouse habitat, the State also recommends that the Coalition implement voluntary compensatory mitigation. The Utah Conservation Plan for Greater Sage-grouse (2019) recommends that voluntary compensatory mitigation should occur at a ratio of four acres restored for every one acre directly impacted from a project. The compensatory mitigation ratio was developed with the aim of replacing lost habitat with additional functional habitat. Typically, habitat restoration occurs through pinyon/juniper removal. However, habitat can be restored using other methods.

In the case of the Emma Park area, there is limited opportunity to restore upland areas of sagebrush similar to what will be impacted due to construction of the Uinta Basin Railway. Greater sage-grouse in the CSGMA are constrained to approximately 32 miles long, 2.5 to 6 miles wide, 110,000 acres of habitat, mostly within Emma Park and Whitmore Park. This area provides year-round habitat for the species, with one of the most limiting factors to the population being summer brood-rearing habitat. In addition to other avoidance and minimization measures discussed between the Coalition and the UDWR, the best recommended compensatory mitigation for impacts for the Uinta Basin Project Railway project will be the creation of wet meadows. Wet meadows, or other mesic areas provide grasses, forbs and insects critical for meeting dietary needs of sage-grouse broods, especially during summer as food becomes more spares due to the typical hot and dry summer weather in the CSGMA.

One method for creating additional wet meadow habitat in the CSGMA is through the restoration of downcut waterways to increase the quantity and quality of sage-grouse

brood habitat. This type of restoration is commonly accomplished by the installation of structures that slow the flow of water in incised washes and streams, trapping sediment and raising the water table, which has the effect of creating wet meadow areas along stream banks. A low-cost method for small waterway restorations is a Beaver Dam Analog (BDA) structure, a semipermeable dam built from wooden posts and faced with juniper, willow, or other available material capable of impounding 2-3 feet of sediment. Larger waterways or more severe down cuts may require larger rock structures and other more expensive BDAs.

To create sufficient wet meadows, the State recommends that BDA's be constructed in a series of four structures which would create a BDA Complex of dams to trap sediment and slow the water. These BDA Complexes, if properly placed, could significantly expand the amount of high-quality summer brood-rearing habitat available to sage-grouse within the CSGMA. Increases in summer brood-rearing habitat quantity and quality may increase sage-grouse reproductive success and help mitigate impacts of any direct habitat loss caused by construction of the Uinta Basin Railway. The State will ensure that all BDA's developed in and around the CSGMA, will be built outside of any new right-of-way for the rail line.

The preferred compensatory mitigation strategy recommended by the State is for the Coalition to provide in-lieu funding or labor to develop 4 BDA Structures (or approximately one BDA Complex) for every acre of habitat that is permanently disturbed. Each BDA Complex (four structures) would be installed by the State, or Coalition, with guidance from the State, and will be maintained by the State.

The four BDA structures for each acre of disturbed habitat would restore important summer brood-rearing habitat to benefit sage-grouse and offset the likely impacts from installation and maintenance of a rail line. From previous projects in the area, it is estimated that a BDA will cost $450 per structure to install and maintain.

Below is a hypothetical scenario of projected costs to install and maintain BDAs based on a draft of potential projected acreage of permanent disturbance for the Whitmore Park Alignment.

1 Acre of Disturbance = 4 BDA Structures
1 BDA Structure= $450
Whitmore Park Alignment => 410 acres of permanent disturbance
410 acres X 4 acre-equivalent X $450 per BDA = $738,800.00

The Coalition could provide a one-time in-lieu fee payment to the State's Sage-grouse Compensatory Mitigation Program, using the recommended ratios above. Once an in-lieu fee payment is made, the State will utilize the funding for the restoration and enhancement of sage-grouse habitat and for monitoring and maintenance of any restoration efforts. Upon payment of the in-lieu fee, the State will provide the Coalition a written receipt stating that the compensatory mitigation requirements or recommendations are satisfied

On the other hand, the Coalition could, on its own, construct the BDA Complexes (with guidance and input from the State), and then the State would provide mitigation credits to the Coalition, once the BDA Complexes are installed and begin to provide functional wet meadow riparian habitat to sage-grouse.

In the event the State is unable to gain permission to access private or federal lands to develop BDA structures within Emma Park, as outlined herein, the State will work with private landowners, the Utah School and Institutional Trust Lands Administration, and other State and Federal Landowners, to develop sufficient credits using State Credit Generation Projects to offset the foreseeable permanent disturbance arising out of rail line construction and maintenance activities.

In addition, in an effort to ensure accurate accounting of acreage of habitat permanently disturbed, the State will defer to guidance in the 2019 Utah Conservation Plan for Greater Sage-Grouse, which calls for an on-the-ground review of impacts prior to finalizing impact analysis. In the State Plan, areas of non-habitat and opportunity areas have been generally identified. Non-habitat areas within SGMAs include lands that do not contribute to the lifecycle of sage-grouse. Similarly, Opportunity Areas have been identified in Emma Park. Opportunity Areas are those portions of an SGMA that currently do not contribute to the lifecycle of sage-grouse, but they are areas where restoration or rehabilitation efforts can provide additional habitat when linked to existing sage-grouse populations. When the State calculates permanent disturbance, the State will only be calculating impacts on sage-grouse habitat based on the "on-the-ground" review and delineation.

Other measures, such as GPS tracking devices that would improve the State's ability to manage and understand sage-grouse movement in the area, have been thoroughly

discussed between the Coalition and UDWR. As part of the ensuring successful compensatory mitigation, the State would be willing to monitor the sage-grouse habitat usage, following construction of the BDAs, by utilizing a small percentage of the compensatory mitigation funding to acquire GPS tracking devices, and substitute alternative riparian restoration approaches as appropriate, rather than asking the Coalition for those funds, in addition to other mitigation scenarios. The State appreciates the opportunity to work with the Coalition on this project.

It is anticipated that by avoiding, minimizing, and through providing compensatory mitigation to benefit sage-grouse, the proposed project will not negatively impact the greater sage-grouse population that uses the general area over the long-term. Based on the State's expertise, and what has been observed in the project area, the State finds the proposed compensatory mitigation solution identified above should be suitable to maintaining and restoring essential wet meadow habitat in the CSGMA.

Thank you, again, for the opportunity to comment on the mitigation for this project. If you have any questions, please send those to PLPCO at the address listed below.

Sincerely,

Kathleen Clarke
Director

cc: Commissioner Brad Horrocks
bhorrocks@uintah.utah.gov

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# Draft Greater Sage-grouse Mitigation Strategies Memorandum

## Uinta Basin Railway

Seven County Infrastructure Coalition

**June 1, 2020**

# Contents



# Tables



# Figures

# 1.0 Introduction

The Seven County Infrastructure Coalition (Coalition), a governmental entity comprising Carbon, Daggett, Duchesne, Emery, San Juan, Sevier, and Uintah Counties, is proposing a new railway that would connect the Uinta Basin's various industries to the national rail network. Currently, the Uinta Basin does not have rail service, and freight needs are met primarily through trucking over a limited highway network. The railway (proposed action) would be constructed and operated under the authority of the U.S. Surface Transportation Board (STB). The STB, in conjunction with other regulatory bodies, is preparing an Environmental Impact Statement (EIS) for this railway, which has the potential to cause environmental impacts. The STB has identified three railway alternative routes for analysis within the EIS. The Coalition, through its consultant, HDR, is conducting engineering and environmental activities in support of the EIS.

The STB has chosen three of the routes proposed by the Coalition for detailed study in the EIS:

- Indian Canyon, as defined by a preliminary engineered route dated November 22, 2019
- Wells Draw, as defined by a preliminary engineered route dated November 22, 2019
- Whitmore Park, as defined by a preliminary engineered route dated February 12, 2020

This memorandum summarizes the acreage in the Utah Division of Wildlife Resources' (UDWR) Carbon Sage-grouse Management Area (CSGMA) that might be affected by the three alternative railway routes as well as strategies that could be used to mitigate potential effects. Through the Coalition's collaboration with UDWR in developing and reviewing these strategies, UDWR has expressed a preference to have the Coalition mitigate impacts by supporting habitat-improvement projects through Utah's Watershed Restoration Initiative, focusing on creating and improving wet meadow habitat in the CSGMA.

**What is wet meadow habitat?**

A wet meadow is an open wetland habitat with predominantly herbaceous (nonwoody) vegetation that can include any combination of grasses, sedges, rushes, ferns, and forbs.

It is important to note that this memorandum is not a final mitigation plan, nor is it a final voluntary mitigation commitment. It is a draft document summarizing the potential mitigation strategies that could be implemented in the final mitigation plan. These strategies have been developed by the Coalition in cooperation with representatives from state and federal agencies including UDWR, the Bureau of Land Management, the Utah Public Lands Policy Coordinating Office, and the Utah State University Wildlife Extension.

## 1.1 Overview of Potential Effects to Greater Sage-grouse Habitat

In order to generate conservative estimates of the expected environmental effects of the three alternatives, an area of potential effects (APE) was established for each alternative. The APE boundary generally extends at least 25 feet from designed railway cut-and-fill lines, as determined based on preliminary engineering (see Figure 1 on page 4 for a representation of the APE and cut-and-fill lines). This boundary was generally continued parallel to the route centerline until an adjustment was required due to design features or changes in topography. The APE was extended for tunnel portals, bridge structures, and road crossings to include construction staging areas and potential road realignments. The APE was also adjusted in some areas to account for access roads and stream relocations and to allow minor vertical or horizontal grade refinements.

Table 1 summarizes the acreage of UDWR greater sage-grouse habitat, non-habitat, and opportunity areas in the APE and potential cut-and-fill lines for each of the three alternative routes. Table 2 below summarizes the acreage of habitat, non-habitat, and opportunity areas by property ownership in the APE and cut-and-fill areas for each of the three alternative routes. Figure 2 on page 5 shows the habitat, non-habitat, opportunity areas, and lek locations in relation to the three alternative routes. See Section 3.5 for a description of habitat, non-habitat, and opportunity areas.

**What is a lek?**

A lek is *a* relatively open area adjacent to sagebrush where male sage-grouse congregate during early spring to engage in courtship displays.

**Table 1. UDWR Greater Sage-grouse Habitat by APE and Cut-and-fill Boundaries**

In acres

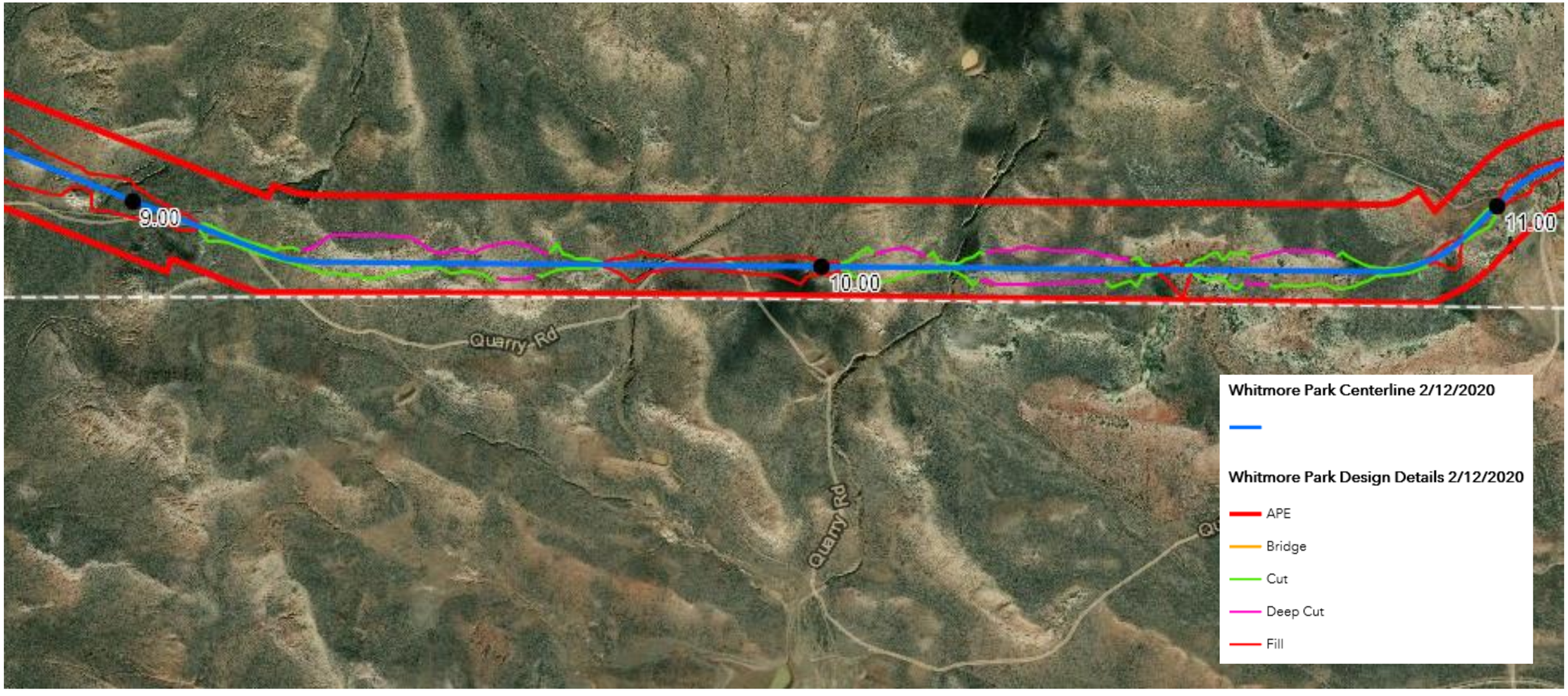
| Type of Area | APE | Cut and Fill |
|---|---|---|
| ***Indian Canyon*** | | |
| Habitat | 689.9 | 242.8 |
| Non-habitat | 17.9 | 7.9 |
| Opportunity | 46.8 | 9.4 |
| **Total** | **754.6** | **260.1** |
| ***Wells Draw*** | | |
| Habitat | 689.9 | 242.8 |
| Non-habitat | 19.9 | 7.9 |
| Opportunity | 46.8 | 9.4 |
| **Total** | **754.6** | **260.1** |
| ***Whitmore Park*** | | |
| Habitat | 1,247.2 | 331.1 |
| Non-habitat | 293.3 | 71.1 |
| Opportunity | 66.5 | 28.8 |
| **Total** | **1,607.0** | **431.0** |

## Table 2. UDWR Greater Sage-grouse Habitat by Property Ownership, APE, and Cut-and-fill Boundaries

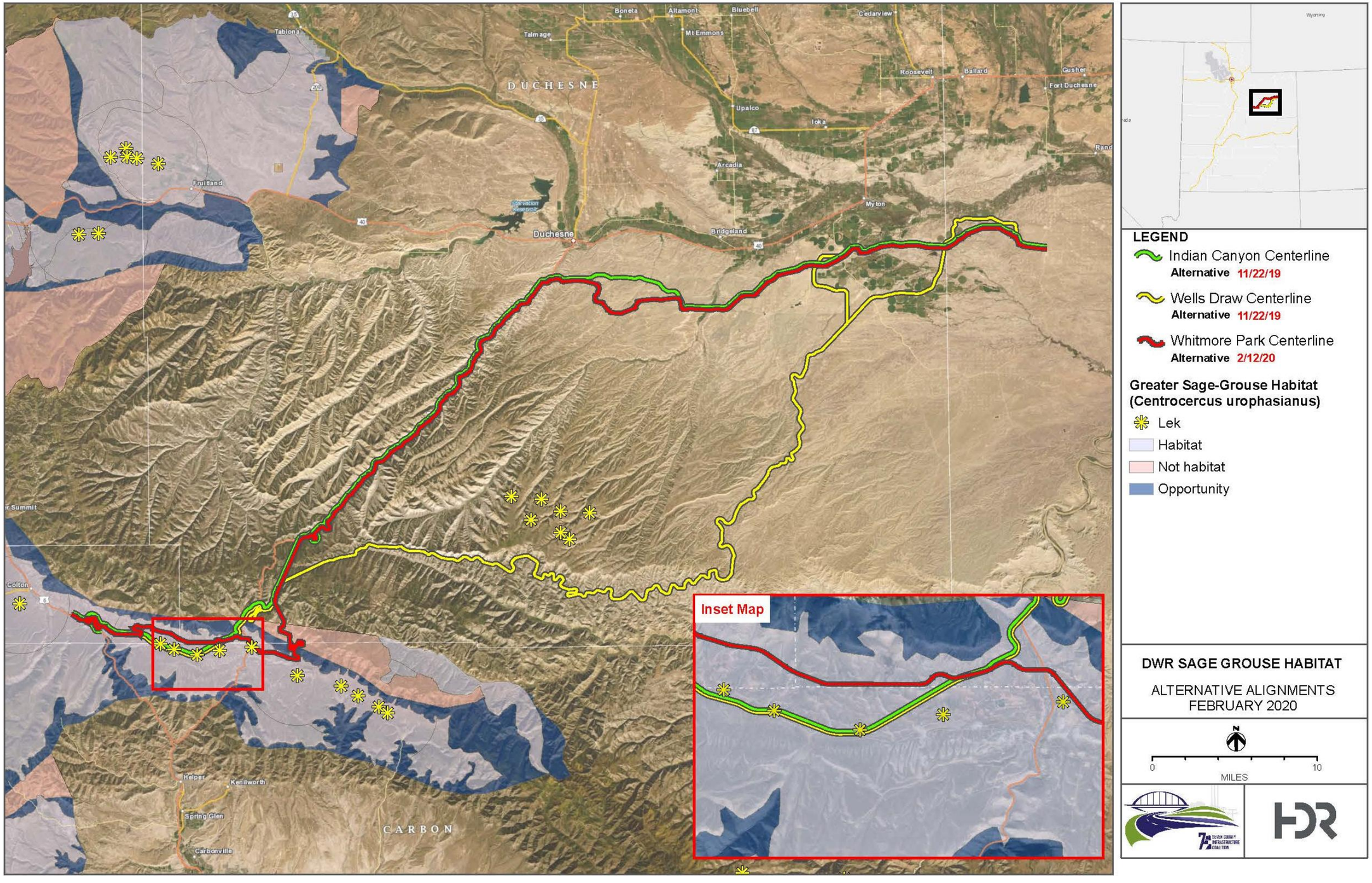
In acres

| Type of Area | Property Ownership | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | BLM | | Private | | SITLA | | UDOT | |
| | APE | Cut and Fill | APE | Cut and Fill | APE | Cut and Fill | APE | Cut and Fill |
| ***Indian Canyon*** | | | | | | | | |
| Habitat | 119.1 | 40.5 | 421.8 | 157.3 | 147.6 | 45.0 | 1.5 | 0.0 |
| Non-habitat | 0.0 | 0.0 | 17.9 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Opportunity | 0.0 | 0.0 | 14.7 | 1.8 | 32.1 | 7.6 | 0.0 | 0.0 |
| **Total** | **119.1** | **40.5** | **454.4** | **167.0** | **179.7** | **52.6** | **1.5** | **0.0** |
| ***Wells Draw*** | | | | | | | | |
| Habitat | 119.1 | 40.6 | 421.8 | 157.3 | 147.6 | 45.0 | 1.5 | 0.0 |
| Non-habitat | 0.0 | 0.0 | 17.9 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Opportunity | 0.0 | 0.0 | 14.7 | 1.8 | 32.1 | 7.6 | 0.0 | 0.0 |
| **Total** | **119.1** | **40.6** | **454.4** | **167.0** | **179.7** | **52.6** | **1.5** | **0.0** |
| ***Whitmore Park*** | | | | | | | | |
| Habitat | 0.0 | 0.0 | 989.9 | 272.3 | 256.5 | 58.8 | 0.8 | 0.0 |
| Non-habitat | 0.0 | 0.0 | 248.7 | 56.5 | 44.7 | 14.6 | 0.0 | 0.0 |
| Opportunity | 0.0 | 0.0 | 66.5 | 28.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **0.0** | **0.0** | **1,305.1** | **357.6** | **301.2** | **73.4** | **0.8** | **0.0** |

**Figure 1. Representation of the APE and Cut-and-fill Lines**



## Figure 2. UDWR Greater Sage-grouse Habitat and Lek Locations



# 2.0 Regulatory Setting

In March 2010, the U.S. Fish and Wildlife Service (USFWS) found that greater sage-grouse warranted listing under the Endangered Species Act. That finding was attributed to habitat fragmentation and "inadequate regulatory mechanisms" designed to protect sage-grouse habitat at the local, state, and federal levels. In response, Utah Governor Gary Herbert established a task force to review relevant information and develop a statewide plan to conserve sage-grouse and their habitat. As a result, the first *Utah Conservation Plan for Greater Sage-grouse* was finalized in February 2013. It identified Utah's Sage-grouse Management Areas (SGMAs), which represent the highest-priority areas for sage-grouse conservation.

In October 2015, USFWS found that sage-grouse did not warrant listing under the Endangered Species Act. That decision was based on new scientific information and voluntary conservation measures put in place since 2010, including State-led conservation actions. The State of Utah has continued its sage-grouse management practices and revised its conservation plan to incorporate practices identified by USFWS in 2015 (UDWR 2019).

The State of Utah's Compensatory Mitigation Program, administered by the Utah Department of Natural Resources (UDNR, of which UDWR is a division), was established in part by the Utah legislature under Utah Code 79-2-501 and subsequent sections, Utah Administrative Code (UAC) Rule R634-3 (Compensatory Mitigation Program), and the *Utah Conservation Plan for Greater Sage-grouse* (UDWR 2019). The Compensatory Mitigation Program was established to offset the impacts of permanent disturbance of greater sage-grouse habitat in Utah.

**What is permanent disturbance?**

Permanent disturbance is an action, caused by humans, that results in a loss of greater sage-grouse habitat for at least 5 years [UAC R634-3-3(28)].

*Compensatory mitigation* refers to "the restoration or establishment of sage-grouse habitat or permanent protection of existing occupied habitat to offset the unavoidable adverse impacts which remain following permanent disturbance to sage-grouse habitat" [UAC R634-3-3(7)]. Before an organization uses compensatory mitigation, it should take the necessary steps to first avoid and then minimize disturbance to sage-grouse and their habitat. If permanent disturbance cannot be avoided, then compensatory mitigation should be voluntarily used to offset impacts.

Each acre of permanent disturbance to sage-grouse habitat, regardless of land-ownership type, is referred to as a "debit," and each acre of sage-grouse habitat within SGMAs that is created, restored, or preserved to offset debits is referred to as a "credit." UAC R634-3-4 recommends that the disturber generate 4 acres of functional habitat or corridors in SGMAs for every 1 acre of permanent disturbance. Credits and debits are tracked annually by UDNR through its Credit Exchange Service. Each mitigation credit should be managed as functional habitat or corridor for the duration of any direct impacts from the permanent disturbance [UAC R634-3-4(6a)].

Compensatory mitigation credits can be generated by creating or protecting sage-grouse habitat in any of the following three ways (UDWR 2019):

- Create functional sage-grouse habitat adjacent to existing occupied habitat that has a live sagebrush canopy of at least 10%, and has no more than 1% canopy cover of conifer trees over 0.5 meter (20 inches) in height.
- Create corridors that link two occupied habitat areas that facilitates safe movement between habitats, particularly by broods. A corridor must be at least 100 acres, have a width of at least 2,000 feet, contain less than 1% canopy cover by conifers, and have at least 15% ground cover in perennial grasses, in addition to the presence of shrubs and forbs.
- Protect existing occupied habitat through a conservation bank, easement, or other mechanism.

# 3.0 Greater Sage-grouse Biology

It is imperative to understand the seasonal movements and habitats used by sage-grouse when making conservation decisions and actions. Sage-grouse require a large, continuous area of sagebrush habitat as well as a substantial understory of grasses and forbs in nesting and brood-rearing habitats. Generally, seasonal habitats for sage-grouse have been defined using four broad categories: breeding, summer, winter, and transitional (UDWR 2019; USDA NRCS 2020).

## 3.1 Breeding Habitats

Breeding habitats consist of areas where pre-nesting, lekking, nesting, and early brood-rearing activities occur. Leks are relatively open areas adjacent to sagebrush where male sage-grouse congregate during early spring (typically mid-March through early May) to engage in courtship displays, known as “strutting.” Peak mating time place shortly after sunrise, although the birds occasionally mate at sunset or under a full moon. After mating, the hens fly from the lek to suitable nesting habitat, which is usually tall sagebrush with quality canopy cover. Nesting and early brood-rearing typically occurs from May through mid-July. In addition to sagebrush cover, successful nest and brood-rearing sites require a substantial understory of grasses and forbs. The understory provides protective cover from predators, and the hens and chicks will feed on the soft forbs and insects.

## 3.2 Summer Habitats

Summer habitats consist primarily of late brood-rearing areas. Late brood-rearing typically occurs between mid-July and mid-October. As the summer months get hotter, the grasses and forbs start to dry out, and the broods might move to more productive areas where conditions are moister. These areas include higher elevations, wet meadows, agricultural fields, and riparian areas adjacent to sagebrush cover, although the broods can stay in drier sites if there are enough insect.

## 3.3 Winter Habitats

Sage-grouse rely entirely on sagebrush for food and cover during winter. Winter habitats are areas where sagebrush is available above the snow. The winter cycle is typically between mid-October and March.

## 3.4 Transitional Habitats

Transitional habitats are those that link or connect seasonal habitats through migration corridors.

## 3.5 Habitat, Non-habitat, and Opportunity Habitat

In general, the seasonal movements of Utah's sage-grouse populations reflect the amount of habitat available to them (UDWR 2019). Seasonal habitats in Utah's SGMAs have been mapped and classified based on current or potential sage-grouse habitat conditions.

- **Habitat areas** include the "combined total of seasonal habitats used by sage-grouse at some point during their lifecycle. Habitat includes the geographical extent of leks, nesting, brood-rearing, transitional, and winter areas."
- **Non-habitat areas** are land that does not contribute to the lifecycle of sage-grouse.
- **Opportunity areas** are those portions of the SGMA that "currently do not contribute to the lifecycle of sage-grouse, but they are areas where restoration or rehabilitation efforts can provide additional habitat when linked to existing sage-grouse populations."

# 4.0 Greater Sage-grouse Mitigation Strategies

The following mitigation strategies have been developed by the Coalition in cooperation with representatives from state and federal agencies including UDWR, the Bureau of Land Management, the Utah Public Lands Policy Coordinating Office (PLPCO), and the Utah State University Wildlife Extension:

1. Greater sage-grouse habitat improvement
2. Limited operation flexibility
3. Greater sage-grouse research funding
4. Predator control
5. Utah's Greater Sage-grouse Compensatory Mitigation Program
6. Conservation easements

Through the Coalition's collaboration with UDWR in developing and reviewing these strategies, UDWR has expressed a preference for a strategy in which the Coalition funds projects that focus on creating and improving wet meadow habitat in the CSGMA (strategy 1). UDWR also supports implementing practical limited operation flexibility, sage-grouse research funding, and predator control (strategies 2, 3, and 4) to further on-site mitigation efforts. The other strategies (Utah's Compensatory Mitigation Program and conservation easements) would be reconsidered if it is determined that strategies 1 through 4 are infeasible or inadequate.

## 4.1 Greater Sage-grouse Habitat Improvement

Through extensive consultation with the Coalition, area biologists said that habitat-improvement projects need to focus on enhancing, restoring, and establishing wet meadows in the CSGMA. Wet meadows adjacent to sagebrush areas are particularly important during the summer months as the grasses and forbs in breeding habitats begin to dry and broods move to moister, more-productive areas seeking food sources. Area biologists have seen some success applying beaver dam analogs to incised streams and have suggested this and other similar structures as methods to boost the water table and improve and expand

mesic habitats in the CSGMA. UDWR and HDR have identified several potential sites in the CSGMA for enhancing, restoring, and establishing wet meadows.

Habitat-improvement projects could be implemented directly by the Coalition or through Utah's Watershed Restoration Initiative. The Watershed Restoration Initiative has sage-grouse–focused projects available for funding, or the Coalition could create and fund new projects. UDWR prefers to have the Coalition mitigate impacts by supporting habitat-improvement projects through Utah's Watershed Restoration Initiative, which focuses on creating and improving wet meadow habitat in the CSGMA.[1]

**What is mesic habitat?**

Mesic habitat refers to land with a well-balanced supply of moisture throughout the growing season, land such as streamsides, wet meadows, springs and seeps, irrigated fields, and high-elevation habitats.

With this approach, the Coalition would fund the project while UDWR would coordinate with landowners; determine specific locations for enhancing, restoring, and/or establishing mesic habitat; implement construction; and monitor sites. UDWR recognizes that the current mitigation rule is not designed to account for this type of mitigation, but UDWR is working toward a solution to determine the credit equivalency of a beaver dam analog structure.

In addition to improving mesic habitat, removing conifers offers another option for improving sage-grouse habitat. Conifers (typically pinyon pine and juniper species) can encroach on sagebrush habitat. When conifers become scattered throughout sagebrush areas, sage-grouse stop using those locations (UDWR 2019). Removing the trees makes the areas suitable for sage-grouse again. Reducing and removing conifers in SGMAs could provide the greatest potential to create sage-grouse habitat in Utah. This is an important option to keep in mind while examining the CSGMA; however, area biologists have not identified any substantial problem areas that need to be addressed at this time.

## 4.2 Limited Operational Flexibility

Limited operational flexibility refers to limiting the activity of Uinta Basin Railway (UBRY) trains during lekking season (March through May) at peak mating times (sunrise and sunset). Sage-grouse are known to be sensitive to noise disturbance. Area biologists have recommended that, if this strategy is implemented, train traffic and speed should be limited for 2 hours during sunrise and 2 hours during sunset so as not to disturb peak mating times. They have suggested that this limited operation schedule should last for 1 to 3 years to allow the birds to habituate to the presence of the trains. This approach is known to have been successful in Whitmore Park, where a new oil well was constructed near a sage-grouse lek.

**What is limited operational flexibility?**

Limited operational flexibility refers to limiting the activity of trains during lekking season at peak mating times.

This approach will be explored by the Coalition. UBRY might be able to create a train schedule in its transportation plan to avoid operating its own trains at those times. However, incoming trains are subject to delivery from other railroads. Since UBRY would not have control of these transportation plans, these deliveries could occur at any time. It might also be possible that some UBRY trackage could operate with Quiet Zone restrictions in areas adjacent to wildlife habitat (such as sage-grouse habitat) and that contain an

[1] Source: Field trip meeting on May 21, 2020, with T.J. Cook, UDWR; Bill James, UDWR; Braden Sheppard, PLPCO; Brad Crompton, UDWR; Amy Croft, HDR; Mike Perkins, HDR; Josh McMillin, HDR; and Nathan Beutler, HDR.

at-grade highway-rail crossing. Quiet Zones are sections of the rail corridor where train crews will not regularly sound their locomotive horns; however, this does not mean that trains can never sound their locomotive horns.

## 4.3 Greater Sage-grouse Research Funding

Area biologists have emphasized the need for continued sage-grouse research in the CSGMA and have expressed interest in UBRY funding the purchase of 10 global positioning system (GPS) collars for the purpose of collecting specific habitat and migration data on the CSGMA sage-grouse population. This purchase could be set up as part of a 2-year study. The Coalition will consider funding greater sage-grouse research as part of the mitigation package.

## 4.4 Predator Control

Tall structures such as electrical transmission and distribution lines, cell towers, and light poles can provide avian predators with elevated perches and nesting sites. Grassland birds, including sage-grouse, are vulnerable to tall anthropogenic structures because sage-grouse evolved in landscapes without such structures that provide habitat for predators.

Area biologists have requested that UBRY minimize tall structures along the railway as a means of predator control for the CSGMA sage-grouse population. The Coalition will examine the potential for installing underground power to siding signal switches and will consider antiperching practices for power poles if overhead power is unavoidable. The Coalition will also consider limiting right-of-way fences through the CSGMA since such fences could trap sage-grouse and increase predators' success.

## 4.5 Utah's Greater Sage-grouse Compensatory Mitigation Program

The Coalition could purchase mitigation credits through Utah's Greater Sage-grouse Compensatory Mitigation Program. Utah's compensatory mitigation program includes three approaches to generate mitigation credits: State Sponsored Program, Term Mitigation Credit Program, and Conservation Bank Program. Although there is some overlap, each approach was designed to address a particular portion of the mitigation need.

- The **State Sponsored Program** is focused on completing the mitigation needed to offset permanent disturbance to sage-grouse habitats on private and Utah School and Institutional Trust Lands Administration (SITLA) land.
- The **Term Mitigation Credit Program** is designed to let private landowners and SITLA develop credits on their land, and sell it to anyone needing credits.
- The **Conservation Bank Program** is patterned after traditional conservation banks commonly used with endangered species. It is designed to be used on private land and is similar to the Term Mitigation Credit Program except with stronger protections and requirements. Also, the disturber must be under a regulatory requirement to perform mitigation.

UAC R634-3-4 recommends that a disturber generate 4 acres of functional habitat or corridors in SGMAs for every 1 acre of permanent disturbance. *Functional habitat* is sage-grouse habitat created through a credit-generation project. It must meet several key requirements, including that it must be located adjacent to habitat that sage-grouse are currently using, must contain a live sagebrush canopy of at least 10%, and must contain no more than 1% canopy cover of conifer trees (for example, junipers) over 0.5 meter (20 inches) in height. Corridors can also be improved. These corridors must also meet thresholds, including limits on tree cover, and must contain minimum amounts of other plants that sage-grouse need. Corridors must be at least 100 acres with a width of at least 2,000 feet.

**What is a corridor?**

A corridor is an area of land that facilitates sage-grouse movement between two or more areas of occupied habitat.

The Coalition will consider purchasing credits through Utah's Greater Sage-grouse Compensatory Mitigation Program. However, given that UDWR prefers on-site mitigation, the Coalition will prioritize on-site mitigation options first and will then use Utah's Greater Sage-grouse Compensatory Mitigation Program if it is determined that on-site mitigation options are not viable.

## 4.6 Conservation Easements

Conservation easements on private property have the potential to conserve habitat areas in the CSGMA. Conservation easements could be established directly between the Coalition and the private property holder or through the Utah Greater Sage-grouse Compensatory Mitigation Program. *Protected habitat* is habitat occupied by sage-grouse that is preserved from permanent disturbance through a conservation easement for at least 20 years and is maintained in sage-grouse habitat (nesting, brood-rearing, wintering, or corridor) for the duration of the easement (UDWR 2019).

The Coalition will consider conservation easements as a potential mitigation option but recognizes the potential obstacles in establishing easements directly with property owners. Additionally, the Coalition recognizes that this strategy is not as high a priority for UDWR as improving habitat in the CSGMA.

# 5.0 References

[UDWR] Utah Division of Wildlife Resources

2019 Utah Conservation Plan for Greater Sage-grouse. https://wildlife.utah.gov/sage-grouse/Utah_Greater_Sage-grouse_Plan.pdf. January.

[USDA NRCS] U.S. Department of Agriculture Natural Resources Conservation Service

2020 Sage Grouse Initiative. https://www.sagegrouseinitiative.com. May.