

Gunnison Sage-grouse (*Centrocercus minimus*)**Species Status Statement.**Distribution

The Four Corners region of Utah, Colorado, New Mexico, and Arizona is the historical distribution of Gunnison sage-grouse. The species no longer occurs in New Mexico or Arizona, but still persists across seven populations in southeastern Colorado and southeastern Utah (Gunnison Sage-grouse Rangewide Steering Committee 2005). Within Utah, Gunnison sage-grouse occupy roughly 70,000 acres of habitat in San Juan County, an area representing approximately 7% of their current range (Gunnison Sage-grouse Rangewide Steering Committee 2005). The largest amount of occupied habitat (approximately 65%) occurs in the Gunnison Basin in Colorado.

Table 1. Utah counties currently occupied by this species.

<b>Gunnison Sage-grouse</b>
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Abundance and Trends

Although it is likely that historically, Gunnison sage-grouse occurrence within its distribution was patchy due to natural habitat fragmentation, the current distribution reflects an estimated 88-93% reduction in pre-settlement range (USFWS 2014a).

Lek count data represent the primary means of monitoring and estimating sage-grouse populations. Based on these data, it is apparent that the bulk of this species' population resides in the Gunnison Basin (Colorado Parks and Wildlife and Utah Division of Wildlife Resources lek count data) with approximately 4,000 birds (approximately 85% of the extant population) estimated in 2014 (USFWS 2014a). By contrast, the remaining six populations (often referred to as satellite populations) are considerably smaller. For data-summary purposes, managers often group Utah's Monticello subpopulation with Colorado's adjacent Dove Creek subpopulation to form the Monticello-Dove Creek population. As of 2014, the Monticello-Dove Creek population was estimated to have less than 100 birds. Recent lek counts in these subpopulations suggest even lower numbers with 2018 high male counts (HMC) of seven in Monticello, and zero in Dove Creek.

Sage-grouse are known to have cyclical population fluctuations (Rich 1985). Based on rolling three year HMC averages, most of the satellite populations began declining during the severe drought in the early 2000's. As a result, Colorado Parks and Wildlife translocated adult birds from Gunnison Basin to several satellite populations (including the Dove Creek subpopulation) to prevent extirpation. Most populations responded with an upward trend from 2011-2016, which

was then followed by recent downward trends. By comparison, the three year HMC rolling average for Utah's Monticello subpopulation has been steadily declining since peaking in 2009, to an all-time low of 8 in 2018 (Colorado Parks and Wildlife and Utah Division of Wildlife Resources lek count data, USFWS 2018).

## **Statement of Habitat Needs and Threats to the Species.**

### Habitat Needs

Gunnison sage-grouse have life cycles and habitat requirements similar to greater sage-grouse, and both are considered obligate users of sagebrush habitat. Much like greater sage-grouse, Gunnison sage-grouse have different habitat requirements based on season and breeding condition (Connelly et al. 2000), and these are often split into winter, breeding, and summer/late fall habitats. Much of the following habitat information is summarized from the Gunnison Sage-Grouse Rangewide Conservation Plan (Gunnison Sage-grouse Rangewide Steering Committee 2005).

- Winter habitat is characterized by tall, dense sagebrush cover associated with southwest facing slopes <15%, or other places where sagebrush is taller than snow cover. During winter, Gunnison sage-grouse have a diet consisting almost exclusively of sagebrush.
- Breeding habitats are generally broken up into lekking, nesting, and early brood-rearing habitat. Leks are usually located in small openings adjacent to sagebrush cover, and can be natural or human created. Sage-grouse often show strong fidelity to traditional lek sites, and some Gunnison sage-grouse leks have been used since the 1950s (Rogers 1964). Nesting occurs in sagebrush habitat typified by live sagebrush with adequate canopy cover and good grass and forb cover in the understory. Nests are generally located beneath sagebrush plants. Early brood-rearing habitat is similar to nesting habitat. Forb and grass cover is important as chicks feed largely on insects at this time. As chicks transition from insects to forbs, and food resources around the nest become scarce as vegetation desiccates, females with broods may move to wet meadows and riparian areas.
- By late summer and early fall, groups of sage-grouse become more social and move to sagebrush-dominated habitats that continue to provide green forbs. Gunnison sage-grouse have been noted in agricultural fields at this time (Commons 1997).

In 2014, U.S. Fish and Wildlife Service designated 1,429,551 acres of critical habitat in six units in Delta, Dolores, Gunnison, Hinsdale, Mesa, Montrose, Ouray, Saguache, and San Miguel Counties in Colorado, and in Grand and San Juan Counties in Utah (USFWS 2014b).

### Threats to the Species

Habitat loss and degradation are the greatest threats to Gunnison sage-grouse. Although they exist in a naturally fragmented landscape of mountains, canyons, and flats, further habitat loss and fragmentation will result in reduced resiliency and viability for the species (USFWS 2018).

In many Colorado populations, residential development is considered to be the primary driver of habitat loss and degradation (Gunnison Sage-Grouse Executive Oversight Committee For Conservation of Gunnison Sage-Grouse 2018). In Utah, 95% of the land occupied by this species is privately owned, most of which is grass pasture or agricultural fields with patches of sagebrush (Gunnison Sage-grouse Rangewide Steering Committee 2005). Additionally, much of these Utah lands are enrolled in the USDA Conservation Reserve Program (CRP) which takes the land out of agricultural production for the time they are enrolled. Unfortunately, much of this land, whether enrolled in CRP or not, lacks sagebrush cover. As a result, any additional loss of the remaining sagebrush habitat through fire, brush removal, vegetation treatments, or development would be detrimental to the already declining Monticello population. Additionally, further loss of wet meadow habitat in this already arid landscape would result in reduced brood rearing success. The Monticello population was found to have the worst overall habitat quality of the seven populations and associated subpopulations in the recent Species Status Assessment (USFWS 2018).

Encroachment by pinyon-juniper woodland is also a major threat for both species of sage-grouse. Sage-grouse avoid areas that have even low amounts of conifer encroachment (Coates et. al 2017). Although conifer encroachment is a lower-ranked stressor for the Monticello subpopulation than other subpopulations and populations (Gunnison Sage-Grouse Executive Oversight Committee For Conservation of Gunnison Sage-Grouse 2018), it still has potential to reduce habitat or further reduce connectivity to other populations. Other threats affecting the Monticello subpopulation are renewable energy and associated power transmission lines, oil and gas development, fence construction, invasive plants, and predation.

A possible emerging threat for Gunnison sage-grouse is West Nile virus, which was introduced into the United States in 1999 and has spread across North America. Greater sage-grouse are highly susceptible to West Nile virus, but as of yet there have not been any documented cases in Gunnison sage-grouse.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

<b>Gunnison Sage-grouse</b>
<b>Very High</b>
Inappropriate Fire Frequency and Intensity
<b>High</b>
Brush Eradication / Vegetation Treatments
Invasive Plant Species – Non-native
Problematic Plant Species – Native Upland
Temperature Extremes
Water Developments for Livestock
<b>Medium</b>
Channel Downcutting (indirect, unintentional)
Disease – Alien Organisms
Droughts
Housing and Urban Areas
Loss of Genetic Exchange / Inbreeding
Prescribed Fire
Problematic Animal Species – Native
Seeding Non-native Plants
Unintentional Spread of Non-native Species
Well Pad Development

### **Rationale for Designation.**

Gunnison sage-grouse was ESA-listed as Threatened in 2014 (USFWS 2014a). This species faces many of the same threats as the greater sage-grouse, but with a smaller population size and a considerably more restricted distribution. Continued special status for the species will help ensure protection of its limited habitat, and encourage conservation projects aimed at increasing population numbers.

### **Economic Impacts of Sensitive Species Designation.**

Sensitive species designation is intended to facilitate coordinated management of this species, which is required to reverse Endangered Species Act Listing and lessen related economic impacts. Gunnison Sage-grouse is currently listed as threatened under the Endangered Species Act. This listing has resulted in costs associated with the development and management of resources in San Juan County due to the increased costs of regulatory compliance for many land-use decisions including energy development, especially due to habitat impacts from associated infrastructure. These costs will remain as long as the species is listed under the Endangered Species Act. If the species is downlisted or delisted, continued efforts will be required to mitigate threats and maintain stronger populations.

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